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# BULLETIN

OF

# THE STATE COLLEGE OF KENTUCKY

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# CATALOGUE

OF THE

OFFICERS, STUDIES, AND STUDENTS

OF THE

# STATE COLLEGE OF KENTUCKY,

LEXINGTON,

WITH A PART OF THE REGULATIONS,

FOR THE

SESSION ENDING JUNE 2, 1904.

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# THE STATE COLLEGE OF KENTUCKY.

## HISTORY.

AGRICULTURAL and Mechanical Colleges in the United States owe their origin to an act of Congress entitled "An Act Donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts," approved July 2, 1862. The amount of land donated was 30,000 acres for each representative in the National Congress. Under this allotment Kentucky received 330,000 acres. Several years elapsed before the Commonwealth established an Agricultural and Mechanical College under this act. When established it was not placed upon an independent basis, but was made one of the Colleges of Kentucky University, to which institution the annual interest of the proceeds of the Congressional land grant was to be given for the purpose of carrying on its operations. The land-scrip had meanwhile been sold for fifty cents per acre, and the amount received—$165,000—invested in six per cent. Kentucky State bonds, of which the State became custodian in trust for the College.

The connection with Kentucky University continued till 1878, when the act of 1865, making it one of the Colleges of said University, was repealed; and a Commission was appointed to recommend to the Legislature of 1879–80 a plan of organization for an institution, including an Agricultural and Mechanical College, such as the necessities of the Commonwealth required. The city of Lexington offered to the Commission (which was also authorized to recommend to the General Assembly the place which, all things considered, offered the best and greatest inducements for the future and permanent location of the College,) the City Park, containing fifty-two acres of land within the limits of the city, and thirty thousand dollars of city bonds for the erection of buildings. This offer the county of Fayette supplemented by twenty thousand dollars in county bonds, to be used either for the erection of buildings or for the purchase of land. The offers of the city of Lexington and the county of Fayette were accepted by the General Assembly.

By the act of incorporation and the amendments thereto, constituting the charter of the Agricultural and Mechanical College of Kentucky, liberal provision is made for educating, free of tuition, the energetic young men of the Commonwealth whose means are limited. The Normal Department, for which provision is also made, is intended to aid in building up the Common School system by furnishing properly qualified teachers. This College, with the additional departments which shall, from time to time, be opened as the means placed at the disposal of the Trustees allow, will, it is hoped, in the not distant future do a great work in advancing the educational interest of Kentucky. Being entirely undenominational in its character, it will appeal with confidence to the people of all creeds and of no creed, and will endeavor,

in strict conformity with the requirements of its organic law, to afford equal advantages to all, exclusive advantages to none. The liberality of the Commonwealth in supplementing the inadequate annual income arising from the proceeds of the land-scrip invested in State bonds, has enabled the Trustees to begin and carry on, upon a scale commensurate with the wants of our people, the operations of the institution whose management and oversight have been committed to them by the General Assembly of Kentucky.

## SCOPE OF STUDIES.

In the act of Congress making provision for the class of colleges to which the State College partly belongs, it is declared "that their leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life." To the three departments of agriculture, the mechanic arts, and military science, contemplated in the act as indispensable, a Normal School has been added by the State and an Experimental Station by the United States, while liberal provision has been made for instruction in all branches of science and in the classics, so that this institution is far more than an agricultural and mechanical college, embracing, as it does, not merely the three original departments, but fifteen others.

## THE NORMAL SCHOOL.

The Normal Department of the State College exists under the authority of acts of the General Assembly approved April 23 and April 29, 1880. Section 7 of the first act briefly defines the object for which the Department was established, "a Normal Department or course of instruction for irregular periods, designed more particularly, but not exclusively, to qualify teachers for common and other schools, shall be established in connection with the College." The second act provides the necessary endowment to make the Department effective.

Ten years ago, in order to prepare young men and women for doing the highest work in their chosen profession, the Department of Pedagogy was established, with a four years' collegiate course, offering Pedagogy as a major study. The attendance upon this course has steadily increased, and the work done has been of a high order.

## THE KENTUCKY EXPERIMENT STATION.

The Agricultural Experiment Station of the State College of Kentucky was established by the Executive Committee of the Board of Trustees in September 1885, when the Department was organized and a Director appointed. In 1886 the Station was recognized and named by the General Assembly, and in 1887 it became the beneficiary of the first annual appropriation of $15,000 under the Hatch act providing for the establishment of Agricultural Experiment Stations in the several States and Territories.

The work of the Station is directed to two objects: 1. To a constant

succession of experiments made by specialists, in order to learn what applications of science will insure the best returns from the farm, the garden, the orchard, the vineyard, the stockyard, and the dairy. 2. To the publication of bulletins announcing such results of the experiments as are found to be valuable to those of the people of Kentucky who seek profit from any of those prime sources of wealth—the soil, the flock, and the herd.

Results of experiments have been published in thirteen annual reports and one hundred and twelve bulletins, and general appreciation of their utility is shown in the fact that, while no bulletin is sent except upon application for it, the mailing list of the Station contains about 9,000 names, and is ever increasing.

With an ample endowment, a large and commodious building planned for the purpose, adequate apparatus, a good experimental farm conveniently situated, and a staff of fifteen scientists engaged in seven divisions of research and in correspondence with other stations, the Kentucky Experiment Station is not only an important adjunct to the College in the education of students for the leading industrial pursuits, but, directly or indirectly through the wide and continual diffusion of knowledge for the benefit of so large a proportion of our population, it is bound to be extremely useful to the Commonwealth at large.

## LOCATION.

The State College of Kentucky is established in the old City Park, just within the southern boundary of Lexington and near the Cincinnati Southern Railway. The site is elevated and commands a good view of much of the city and of the surrounding country.

Lexington, now a growing city of thirty-odd thousand inhabitants, is in the heart of the far-famed Bluegrass region, a region distinguished for fertility and healthfulness, wealth and beauty. Numerous schools and churches an intelligent and refined population, well paved streets, handsome buildings, extensive water-works, and an unsurpassed system of street electric railways make Lexington attractive as a seat of learning and place of residence, while the splendid stock farms scattered over the large body of fertile country around it afford advantages hardly equaled elsewhere for the student who desires to become familiar with the best breeds of horses, cattle, sheep, and swine in America. Moreover, with railroads diverging in seven directions, Lexington is the railroad center of Kentucky, and in direct connection with Louisville, Cincinnati, Maysville, and Chattanooga, and with more than seventy counties of the Commonwealth. And when four interurban railways are added to the two completed, their numerous daily trains will enable students to attend the College conveniently from their homes as far as twenty miles away.

## GROUNDS.

The campus of the College consists of fifty-two acres of land, located within the corporate limits of Lexington. The South Limestone electric car line extends along the western border of the campus, affording oppor-

tunity to reach in a few minutes any part of the city. The campus is laid out in walks, drives, and lawns, and is planted with a choice variety of native and exotic trees and shrubs, to which additions are constantly being made. A portion of the land has recently been reserved for a botanical garden, in which will be grown the most desirable native plants, with a view to testing their adaptability to cultivation and to giving increased facilities to students taking agricultural and biological courses. Two and a half acres, forming the northeast portion of the campus, inclosed and provided with a grand stand, is devoted to the field sports of the students.

About three-quarters of a mile south of the campus, on the Nicholasville pike, an extension of South Limestone street, is the Experiment Station Farm, consisting of two hundred and three acres, to which sixty-four and a half acres have been added by recent purchase. Here the field experiments of the Station are conducted, and students have opportunities to witness tests of varieties of field crops, dairy tests, fertilizer tests, fruit-spraying tests ; in short, all the scientific experimentation of a thoroughly equipped and organized Station. The front of the farm is pasture and orchard. The back portion is divided off into two hundred one-tenth acre plots, for convenience in making crop tests.

## BUILDINGS.

*The Main Building*.—This is a structure of stone and brick, 140 feet long and 68 feet in width. It contains the office of the President and of the Business Agent, and on the third floor, counting the basement floor as one, is the chapel, in which each day the students and the Faculty meet for worship, and in which are held public gatherings and such other meetings as bring together the entire student body. The remaining space in this building is occupied by recitation rooms.

*The Old Station Building*.—This handsome structure is well planned for the object for which it was built. It is seventy feet in length and fifty-four feet in width, with a tower projection in front, and an octagonal projection eighteen by eighteen on the north side. The building is two stories high, upon a basement eleven feet from floor to ceiling. The main entrance is on the first floor, on the west side of the building, through an archway fifteen feet wide,

This building is henceforth to be dedicated exclusively to the Department of Chemistry.

*Mechanical Hall*.—This building covers altogether an area of about 20,000 square feet, is constructed of stone and pressed brick, and is well furnished with machinery and appliances for work in Mechanical Engineering.

*The Dormitories*.—The two large dormitories on the campus afford lodgings for the students who wish to lessen expense in this direction. Other buildings on the campus are a brick dwelling for the President and a cottage occupied by the Commandant.

*Science Hall*.—This hall, built during the year 1897 for the departments

# FACULTY.

(In the order of appointment.)

JAMES KENNEDY PATTERSON, PH. D., LL. D., F. S. A., *President.*
*Professor of History, Political Economy, and Metaphysics.*

JAMES GARRARD WHITE, A. M.,
*Professor of Mathematics and Astronomy,*

JOHN HENRY NEVILLE, A. M., LL. D., *Vice-President,*
*Professor of Greek and Latin.*

WALTER KENNEDY PATTERSON, A. M.,
*Principal of the Academy.*

JOSEPH HOEING KASTLE, PH. D.
*Professor of Chemistry.*

RURIC NEVEL ROARK, PH. D.,
*Principal of the Normal School.*

JOSEPH WILLIAM PRYOR, M. D.,
*Professor of Anatomy and Physiology.*

FREDERICK PAUL ANDERSON, M. E.,
*Professor of Mechanical Engineering.*

CLARENCE WENTWORTH MATHEWS, B. S.,
*Professor of Botany, Horticulture, and Agriculture.*

ARTHUR MCQUISTON MILLER, A. M.,
*Professor of Geology and Zoology.*

MERRY LEWIS PENCE, M. S.,
*Professor of Physics.*

PAUL WERNICKE, PH. D.,
*Professor of Modern Languages.*

JOHN PASCAL BROOKS, M. S.,
*Professor of Civil Engineering.*

ALEXANDER ST. CLAIR MACKENZIE, M. A.,
*Professor of English and Logic.*

CHARLES JOSEPH NORWOOD,
*Professor of Mining Engineering.*

JOHN THEODORE FAIG, M. E.,
*Professor of Machine Design.*

GEORGE LAWRENCE BYROADE, CAPT. U. S. A.,
*Commandant and Professor of Military Science.*

Miss Elizabeth Shelby Kinkead,
*Lecturer on English Literature.*

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## ASSISTANTS.

John Lewis Logan, A. B.,
*Assistant Professor in the Academy.*

Robert Lee Blanton, M. Litt.,
*Assistant Professor of Greek and Latin.*

Joseph Morton Davis, A. B., B. S.,
*Assistant in the Academy.*

Victor Emanuel Muncy, B. S.,
*Assistant in the Academy,*
*Instructor in Free-hand Drawing.*

James Richard Johnson, B. M. E.,
*Assistant Professor of Mathematics.*

Milford White, B. C. E., M. S.,
*Assistant in the Normal School.*

James Edward Winston, M. A.,
*Assistant in the Academy,*
*Instructor in Freneh, German, and Pedagogy.*

Leon Kaufman Frankel, B. M. E.,
*Assistant in Mechanical Engineering.*

*Arthur Rodney Sawyer, E. E.,
*Assistant Professor of Electrical Engineering.*

Asher Graham Spillman,
*Assistant Inspector of Mines.*

Joseph Dicker,
*Assistant in Blacksmith Shop and Foundry.*

Mrs. Florence Offutt Stout,
*Instructor in Physical Culture.*

W. Walter H. Mustaine, B S ,
*Physical Director.*

Theodore Tolman Jones, A. M.,
*Assistant in English and Mathematics.*

Miss Martha Ripperdan White, M. S.
*Assistant in Mathematics.*

William Mathews Marks, B. M. E ,
*Assistant in Shopwork and Drawing.*

---

*Resigned. Succeeded March, 1904, by

Alexander Massey Wilson, M. E.

GORDON THURMAN,
*Engineer and Assistant in Woodshop*

---

HARRISON GARMAN,
*Lecturer on Entomology.*

JOSEPH NELSON HARPER, B. S.,
*Lecturer on Agriculture.*

DAVID WILLIAM MAY, M. S.,
*Lecturer on Animal Husbandry.*

CLARENCE W. DORSEY (U. S. DEP. AGR.),
*Lecturer on Soils.*

---

EDWARD O. GUERRANT KELLY, B. S.,
*Feilow Assistant in Anatomy and Physiology.*

BESSIE LEE MONSON, B. PED.,
*Assistant in the Normal School.*

REUBEN BATSON SADLER, A. B., B. S ,
*Fellow Assistant in Geology.*

NELLIE HERBERT WHITFIELD, B. S.,
*Fellow Assistant in Botany.*

---

ROBERT HARGROVE BARCLAY,
*Leeture Assistant in Mining Engineering.*

J. HARRY CLO,
*Lecture Assistant in Physics.*

BENJAMIN ROBERT HART,
*Lecture Assistant in Chemistry.*

JOSEPH GRAHAM LEWIS.
*Lecture Assistant in Civil Engineering.*

REMUS PAYNE,
*Lecture Assistant in Mechanical Engineering.*

CLAUDE ROBERT SMITH,
*Lecture Assistant in Chemistry.*

### OFFICERS.

Mrs Lucy Berry Blackburn,
*Monitress.*

Joseph William Pryor, M. D.,
*Surgeon of the Battalion.*

Miss Mary Hodges,
*Registrar.*

David C. Frazee,
*Business Agent.*

Clarence W. Mathews,
*Secretary of the Faculty.*

Mrs. Caroline Embry Wallis,
*Matron of Patterson Hall.*

John H. Neville,
*Editor of the Catalogue.*

## THE KENTUCKY EXPERIMENT STATION.

### BOARD OF CONTROL.

Judge George B. Kinkead, *Chairman* ..... Lexington.
Judge William C. Bell..... .....Harrodsburg.
David F. Frazee, Esq.... ... .....Lexington.
President James K. Patterson, *ex-officio*.....Lexington.
Director M. A. Scovell, *ex-officio*..... .....Lexington.

### OFFICERS.

Melville Amasa Scovell, M. S.,
*Director and Chemist.*

Alfred Meredith Peter, M. S.,
*Chemist.*

Henry Ernest Curtis, M. S.
*Chemist of Fertilizers.*

Harrison Garman,
*Entomologist and Botanist.*

Joseph Nelson Harper, B. S.
*Agrtculturist.*

William Henry Scherffius, B. S.
*Chemist.*

Robert McDowell Allen, A. B.,
*Secretary of Food Division.*

Job Darbin Turner, B. Ped.,
*Secretary to the Director.*

James Oscar LaBach, M. S.,
*Chemist of Food Division.*

Miss Mary LeGrand Didlake, M. S.,
*Assistant in Entomology and Botany.*

Saxe Dabney Averitt, M. S.,
*Assistant Chemist.*

David William May, M. S.,
*Superintendent of Animal Husbandry.*

Walter Gilbert Campbell, A. B.,
*Assistant in Co-operative Experiments.*

Oliver March Shedd, B. S.,
*Assistant Chemist.*

George Nelson Keller,
*Assistant in Entomology and Botany.*

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## U. S. WEATHER BUREAU.

Observer, R. H. DEAN.

There has been established at the College by the U. S. Department of Agriculture a Station of the Weather Bureau, with first-class instrumental equipment, and working in close connection with the College and the Experiment Station. Students who are interested in the study of meteorology and kindred sciences will find at this Station of the Bureau a rare chance for special investigation, and they are welcome to such benefits as the Station affords.

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## ADMISSION.

A student is admitted to the State College in one of five ways:

I. By examination.
II. By certificate from an accredited school.
III. By certificate from the College Academy.
IV. By transfer of credits from a college or university.
V. As a special student.

### I. ADMISSION BY EXAMINATION.

For the Freshman Class students are examined on the following:

1. In English.—(*a*) On Advanced Grammar. Selections for analysis and parsing are arranged to test the candidate's knowledge of the structure of the language. (*b*) On Rhetoric and Composition. The candidate is required to write two essays of not less than two hundred words each, one on a subject taken from a prescribed work of some standard author, the other on a subject chosen by the candidate. The books from which subjects will be taken are: 1902—Burke's *Speech on Conciliation with the Colonies;* Shakespeare's *Macbeth;* Milton's *L'Allegro, Il Penseroso, Comus, and Lycidas;* Macaulay's essays on *Milton* and *Addison*. 1904, 1905—Shakespeare's

*Merchant of Venice* and *Julius Cæsar;* Addison's *Sir Roger de Coverley Papers;* Goldsmith's *Vicar of Wakefield;* Coleridge's *Ancient Mariner;* Scott's *Ivanhoe;* Carlyle's essay on *Burns;* Tennyson's *Princess;* Lowell's *Vision of Sir Launfal;* George Eliot's *Silas Marner;* and also the books prescribed for 1902.

For a connected account of these books and of their authors Halleck's History of English Literature is recommended. The candidate must be familiar with the plots, incidents, and characters of each work, and be prepared to show his ability to write correct English. No candidate will be admitted whose work is notably deficient in a knowledge of spelling, punctuation, paragraphing, and syntax.

2. In History.—(*a*) On Eggleston's History of the United States, or an equivalent. (*b*) On General History, in amount equivalent to Anderson's General History.

3. In Geography.—(*a*) On Advanced Descriptive, Mathematical, and Political Geography, as presented in Butler's Complete, or The Natural Advanced, Geography. (*b*) On Physical Geography, as presented by Tarr or Davis.

4. In Mathematics.—(*a*) On Arithmetic. A thorough knowledge of the subject is required. (*b*) On Algebra. The student must show a thorough knowledge of the subject as presented in Wentworth's Higher Algebra, including factors, common divisors and multiples, fractions, involution, embracing the binominal theorem for positive integral exponents, evolution, theory of exponents, radicals, imaginary quantities, inequalities, equations of the first and second degrees involving one or more unknown quantities, equations solved like quadratics, simple indeterminate equations, and equations involving radicals. The student is expected to state and explain the reason for every step in his work. (*c*) On Geometry. The student must exhibit a knowledge of the subject as treated in books I to V inclusive of Beman and Smith's Geometry, including the larger part of the matter relating to triangles, parallels and parallelograms, polygons and circles, as presented in the best American text-books. The student should be able to apply the principles of Geometry to practical examples, to construct diagrams quickly and accurately. In proving a theorem or solving a problem he should be able to prove every statement made by going back, step by step, till he rests on primary definitions and axioms.

5. In Latin.—On genders, declensions, conjugations, syntax and idioms as they are treated in Smiley and Storke's Beginner's Latin Book; Viri Romæ; ten lives of Nepos; five books of Cæsar; Daniell's New Latin Composition; Creighton's History of Rome; Guerber's Myths of Greece and Rome.

Strict attention must be paid to quantity and accent.

6. In Greek.—On genders, declensions, conjugations, accents, syntax, and idioms as they are treated in White's Beginner's Greek Book; Moss' Greek Reader; five books of Xenophon's Anabasis; Pearson's Greek Prose Composition; Oman's History of Greece.

Equivalents are accepted in both Latin and Greek.

Candidates for admission to the courses in Science, Agriculture, Mechanical and Civil Engineering will be examined on 1, 2, 3, and 4.

Candidates for admission to the course in Pedagogy will be examined on 1, 2 (*a*), 3 (*a*), 4, and 5.

Candidates for admission to the course in Classics will be examined on 1, 2 (*a*), 3 (*a*), 4, 5, and 6. If French and German be substituted for Greek, 6 will be omitted.

### II. ADMISSION FROM AN ACCREDITED SCHOOL.

An applicant for admission to a class in the College who presents from the Principal or Superintendent of an accredited school a certificate that he has duly completed the courses of study prescribed for admission to that class will receive from the President of the College a permit entitling him to admission thereto without further examination.

The list of accredited schools is given elsewhere in this catalogue.

### III. ADMISSION FROM THE COLLEGE ACADEMY.

A student who presents from the Principal of the Academy a certificate that he has properly completed either course of study set forth in the curriculum of the Academy will be admitted to the Freshman Class of the corresponding course in the College without further examination.

### IV. ADMISSION FROM A COLLEGE OR UNIVERSITY.

An applicant for admission who has been a student of another college or of a university of respectable standing, upon presenting a certificate of his honorable dismission therefrom, may be admitted *ad eundem gradum* in this College, provided that he shall satisfy the appropriate professors that he has duly completed a course of study equivalent to that completed by the class which he proposes to enter.

### V. ADMISSION AS SPECIAL STUDENT.

A graduate of another college or of a university may enter this College at any age in order to pursue a special line of work and study, but all others must be at least twenty-four years of age, the limit below which appointments of beneficiaries under the law must be made.

### VI. ADMISSION FROM THE NORMAL SCHOOL.

Although the Academy is the recognized preparatory school for all courses of study in the College, credit is given nevertheless to students who have completed any subject in the Normal School, for the amount of work done and certified by the Principal of the Normal School or his chief assistant. To the extent of such certified credits students from the Normal Department will be admitted without examination to the Freshman Class. On all other subjects required for admission in accordance with the conditions set forth on pages 13, 14, 15, they must pass examination.

## DEPARTMENTS.

The studies of the State College are distributed into eighteen Departments, each in charge of a responsible head, the heads constituting the Faculty. Arranged in chronological order the Departments are:

I. History, Political Economy, and Metaphysics.
II. Botany, Horticulture, and Agriculture.
III. The English Language and Literature.
IV. Military Science.
V. Chemistry.
VI. Mathematics and Astronomy.
VII. Modern Languages.
VIII. Greek and Latin.
IX. The Academy.
X. Pedagogy, or the Normal School.
XI. Civil Engineering.
XII. Mechanical and Electrical Engineering.
XIII. Anatomy and Physiology.
XIV. Geology.
XV. Zoölogy.
XVI. Physics.
XVII. Entomology.
XVIII. Mining Engineering.

# COURSES OF STUDY.

## I. DEPARTMENT OF HISTORY, POLITICAL ECONOMY, AND METAPHYSICS.

PRESIDENT PATTERSON.

The course of instruction in this Department includes an outline of Ancient, Medieval, and Modern History. Attention is given to the various forms of government, their characteristic features and points of difference, to the progress of civilization, the origin and development of parliamentary government, the rights and duties of citizenship.

In the period covered, Modern History and the History of England and of the United States occupy the most prominent place.

Walker's Science of Wealth is made the basis of instruction in Politica Economy. Students are, however, made familiar with the principles upon which rest the rival doctrines of Protection and Free Trade.

The study of Mental and Moral Philosophy extends through one year. Sir William Hamilton is used as the basis of instruction in Metaphysics, and Mackenzie in Ethics. Concurrently with recitations from these authorities, the pupil is made familiar with the principles upon which rival systems of philosophy and morals are based, and the arguments by which they are maintained. Ancient and modern systems are thus brought under review, and the necessary data furnished upon which to ground intelligent opinions.

## II. DEPARTMENT OF AGRICULTURE, HORTICULTURE, AND BOTANY.

PROFESSOR MATHEWS.

This Department occupies rooms on the first floor of the Natural Science Building, including a general laboratory, a lecture room and advanced laboratory, and an instructor's office.

Each laboratory is suitably furnished with tables, water and gas fixtures, charts, etc., and the lecture room with opera chairs, a stereopticon, etc. The further equipment, both for elementary work and for the use of advanced students, is new and of the best quality, and includes an ample supply of compound and dissecting microscopes for the individual use of each student, several first-class microtomes, ovens and sterilizing apparatus, together with delicate balances and other apparatus for the study of plant physiology.

Among other facilities for study, the Department possesses a greenhouse (85 x 20 feet, giving an opportunity for the continuous study of living plants throughout the winter months, and for experiment work in plant physiology.

The herbarium contains a nearly complete representation of the flora of Kentucky, with a considerable number of foreign exchanges. It is due

primarily to the efforts of the late Dr. Robert Peter, who made a quite extensive collection of Kentucky plants about sixty years ago, and also exchanged specimens with the prominent botanists of that day, thus forming the nucleus of the present collection, which therefore possesses considerable historical value. Constant additions are now being made to the herbarium by collecting excursions over the State and by exchanges with other institutions.

The Department Library is receiving constant accessions of carefully selected books, and already contains the most important botanical and horticultural works of reference, and these, as well as the best current literature upon these subjects, are freely available to students during college hours.

For the study of horticulture and agriculture, many of the appliances already mentioned are again utilized, and in addition to the very complete equipment of the Experiment Station incidentally affords superior opportunities for the instruction of students.

The Horticultural Department of the Station has an excellent forcing and greenhouse plant upon the college grounds, consisting of four glass houses of the most approved methods of construction, containing 4,000 square feet of glass, in addition to hot-beds and cold frames outside. These houses are run to their full capacity through the winter months in the conduct of experiments upon the culture of lettuce, radishes, tomatoes, cauliflower and other vegetables, and upon the various methods of plant propagation.

The extensive list of varieties of vegetables and fruits growing upon the Experiment Farm gives an opportunity for a comparative study of varieties rarely, if ever, found upon the ordinary farm.

The College campus contains a large number of ornamental trees and shrubs, and numerous varieties of annual and perennial flowering plants, and with other public grounds in Lexington affords ample facilities for the study of ornamental and landscape horticulture.

In the distinctively agricultural studies the operations of the farm department of the Experiment Station furnish an excellent opportunity for the study of the effects of various fertilizers, varieties of wheat, corn, and other field crops, and the many problems of dairying.

In order to give special attention to dairy experiments a building has been erected upon the Station Farm and fully equipped with the most modern appliances for the care of milk and the manufacture of butter and cheese.

All these facilities for the experiment work of the Station, while primarily designed for that purpose, can not fail to be of the greatest value as object lessons in connection with the studies of pupils in agriculture.

The general subjects comprised within the scope of this department are subdivided as follows:

### I. ELEMENTARY BOTANY.

Required of all students of the Scientific, Normal, and Agricultural courses who have not completed a corresponding course in some preparatory school.

SPRING TERM—This course consists of a study of the elements of structural botany and plant physiology, with determination of a number of species of the flowering plants. It corresponds to the work done in most of the high schools in the State, and if satisfactory evidence is presented, by examination or otherwise, that such a course has been completed before entering the College, the student will be admitted directly to the general botany of the Sophomore Class.

*Text-books and Books of Reference:* Gray's Lessons and Manual of Botany; Bailey's Lessons with Plants; Bergen's Elements of Botany.

### II. GENERAL BOTANY.

Required of all Sophomores in the Scientific, Normal, and Agricultural courses.

FALL AND WINTER TERMS—The work of the course comprises a general survey of the morphology and physiology of plants, and it is designed to give the student who goes no further with the subject a comprehensive view of the entire vegetable kingdom, while for the student who will continue his botanical study it is intended to afford a substantial basis for more exhaustive special studies. While it is accompanied with lectures and recitations, the laboratory method is the form of instruction principally used, and from the very beginning of his work the pupil is directed to the study of plants themselves, using the text-book as an aid to correct his mistakes and to enlarge his field of view. He is early instructed in the use of the compound and dissecting microscopes, and with their aid he begins in the Fall term the study of the simplest forms of the vegetable kingdom.

*Text-books:* Coulter's Plant Structures, supplemented by directions in the laboratory and by numerous standard works of reference.

### III. SYSTEMATIC BOTANY.

Required of Sophomores who elect Geology, Zoölogy, Anatomy and Physiology, Botany, or Agriculture as a major study.

SPRING TERM—The principal feature of this course is the taxonomy and classification of the ferns and flowering plants, with special reference to those groups which are of economic importance.

### IV. PLANT HISTOLOGY AND ECONOMIC BOTANY.

Required of Juniors who elect Botany or Agriculture as major study.

FALL TERM—In Economic Botany, which is assigned for Tuesdays and Thursdays, a thorough study is made of selected families of plants, with regard to their characteristics, distribution, habitat, economic importance, etc. In Histology the student is given instruction and training in collodion, paraffine, and other methods of preparing vegetable tissues for microscopic study, accompanied and followed by a study of the slides so prepared.

*Text-book:* Chamberlain's Methods in Plant Histology.

### V. PLANT PHYSIOLOGY.

Required of Juniors who elect Botany or Agriculture.

SPRING TERM.—The course is conducted by lectures and laboratory experiments, which aim to bring to the student a clear conception of the main facts and principles of plant physiology, and naturally supplements the histological studies of the Fall Term.

To a considerable extent the laboratory experiments are carried on in the College greenhouses.

*Text-books:* The laboratory manuals of Ganong and Macdougal.

### VI. THESIS.

The first term of the Senior year is devoted to the study of some special subject, selected with reference to the taste and abilities of the student, as a preliminary to the preparation, during the winter and spring terms, of a thesis for graduation.

### VII. HORTICULTURE.

Required in the Agricultural Course. The work in this subject begins in January of the Junior year and extends through two terms. The time allotted to the subject is divided between lectures, recitations, and actual practice in horticultural operations, special prominence being given to the latter feature of the course.

In the lectures are discussed the principles underlying horticultural practices; the propagation of plants; the physiological considerations upon which are based the operations of budding, grafting, pruning, training, etc.; greenhouses, their construction, heating, and management; and vegetable, fruit, and landscape gardening. In connection with the lectures, the work in the greenhouses and upon the college and experimental grounds is freely used for illustrative purposes, and occasional visits are made to the greenhouses, nurseries, market and fruit gardens in or near Lexington

In the practical part of his studies the pupil is not only taught the best methods of doing his work, but is encouraged to seek for the principles that make such methods best. He performs for himself the various operations of seed testing and seed sowing; propagation by cutting, layering, division, etc.; budding, grafting, crossing, hybridizing, and other forms of horticultural practice.

In order to make this work of the highest value to the student, he is required throughout the course to make accurate observations and careful notes upon his progress, and upon the results of these processes.

### VIII. GENERAL AGRICULTURE.

Required of Juniors in the Agricultural Course.

The subject is taught by means of lectures and text-books, accompanied by practical and illustrative exercises when the subject and weather will permit.

The course as presented here is divided into two general heads. **Soils* and *Field Crops*, and the instruction is given mainly by Prof. J. N. Harper, of the Agricultural Experiment Station.

The lectures on soils include a discussion of the physical properties of soils and their improvement by cultivation, fertilization, etc.; the relation of soils to heat, air and moisture; soil water, its movement through different kinds of soils; the influence of humus, the conservation of soil moisture, and drainage.

In the general subject of Field Crops, lectures are given upon the history, production, cultivation, fertilizers, rotations, varieties and harvesting of Kentucky farm crops, particularly tobacco, wheat, corn, and hemp.

### IX. ANIMAL HUSBANDRY.

The instruction under this general subject is given in the form of lectures, demonstrations, and practical laboratory exercises, by Prof. D. W. May, of the Experiment Station. It includes a study of the principles of stock feeding, stock judging, breeds of live stock, and the operations of the dairy. In each of these subdivisions the lectures are supplemented as far as possible by practical work upon the part of the student.

For the study of stock breeding, and kindred subjects, the location of the College is exceptionally favorable, situated as it is in the center of the Bluegrass region of Kentucky, with its numerous herds of high-bred horses, to which occasional visits are made as opportunity offers.

The live stock upon the Experiment Station farm, together with the various experiments in progress in feeding, dairying and in other directions, afford facilities for illustrative purposes.

### THE COURSE IN AGRICULTURE.

The distinctive feature of this course is the instruction in those branches of study which bear the most direct and practical relation to agricultural pursuits. It includes as subjects of primary importance the study of General and Agricultural Chemistry, General Zoölogy and Entomology, Botany, Horticulture, Geology, and General Agriculture.

In addition to these subjects, the student devotes considerable time to the work of other departments, including a year in English and Mathematics, courses in Drawing, French, and German, Physiology, Physics and Political Economy.

To meet the needs of young men who for any reason cannot hope to complete a four years' course in Agriculture, a special course of two years has been arranged.

This course includes all of the more distinctively agricultural subjects of the full course, but does not lead to a degree. A certificate of proficiency

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*For the year 1903-1904 the instruction on this subject was supplemented by a special course of lectures, with laboratory and field demonstrations, continued through the month of January, by Mr. Clarence W. Dorsey, of the Bureau of Soils, U. S. Department of Agriculture, under special appointment of the Secretary of Agriculture, James Wilson.

will, however, be issued to those students who complete the studies of the entire course in a satisfactory manner.

The schedule of studies for this course will be found on another page. (See "Schedule of Studies.")

### THE SHORT (WINTER) COURSE IN AGRICULTURE.

In this course an opportunity has been provided for young men who desire to excel in their chosen occupation of farming to secure an elementary knowledge of those scientific principles which lie at the foundation of all success in agriculture. In order that such a course of study may not interfere with the work of the busy season upon Kentucky farms, it begins in January immediately after the Christmas recess, and continues for ten weeks. Its aim is to give to ambitious young farmers accurate and practical information on such important topics as manures and commercial fertilizers; agricultural chemistry; soils and their origin; plant life on the farm; vegetable and fruit growing; diseases of plants; injurious insects; the principles of veterinary science, and the treatment of the simpler ailments of farm animals; care and feeding of live stock; the dairy cow; milk and the manufacture of butter and cheese.

In such subjects as will permit it, actual practice will be given in the manipulation of materials and appliances of study, such as the care of milk, practical butter-making, spraying plants for injurious insects and diseases, and in horticulture the practices of seed-sowing, pruning and training, grafting, etc.

This course affords to young men on farms, whose time and means are limited, an opportunity to utilize the winter months to the highest possible advantage by fitting themselves more thoroughly for their life-work.

No examinations are required for admission to this course, the only requirements being that the applicant must be of good moral character, must have had a good common school education, and be at least sixteen years of age, or preferably somewhat older, to profit fully by this course.

To residents of Kentucky, instruction in this course will be free, the only expenses being the cost of a few books and other necessary incidentals, together with board and room and other personal expenses. Board and a room can be secured at prices varying at from three to five dollars per week, so that the total expenses of a student during his entire ten weeks' stay need not exceed from thirty-five to fifty dollars.

Further information regarding this course may be obtained by addressing President Patterson or Professor Mathews, at the College.

## III. DEPARTMENT OF ENGLISH.

### PROFESSOR MACKENZIE.

The intention is to make the course in English as thorough and comprehensive as that of any college in the United States. Several collateral questions are embodied, because a knowledge of them is essential to a liberal education, and if neglected in the English Course they fall less appropriately into the routine of any other college department. In spite of certain

necessary restrictions abundant scope is given for individuality, and the ambitious student is offered every encouragement. Without the study of literary evolutions there never can be a science of literature, and at present there is no field that affords so great an opportunity for original research. For the scientific study of even one literary type the necessary materials have not yet been gathered, hence the merit and the charm of the new Comparative Literature. In view of the fact that over 80,000 books are issued annually by the more cultured nations of the old world and the new, of which only 13,000 are published in Britain and America, it becomes imperative that the student should have a bird's eye view of the vast non-English literature. An alternate course in Universal Literature has therefore been instituted, suggestive rather than exhaustive, and in English dress many of the writings under review have already appeared. Philology has two principal divisions, the literary and the linguistic, the latter of which involves a comparative study of the laws and properties of languages, and hence is known as Comparative Philology. To the student who aims at a scholarly knowledge of English, the study of Gothic, the oldest of the tongues with which English is cognate, is not without value.

### FRESHMAN YEAR.

First Term—Literature of the Nineteenth Century, English and American, a critical and philosophical study of some of the masters—books as interpreters of life—underlying unity of poetry and the fine arts—letter-writing, its history and mystery. Lectures on advanced rhetoric.

Second Term—Lectures on Carlyle and some of his European and American contemporaries. As a basis for further appreciation of literature and rhetoric, one of this modern seer's works, such as Past and Present, or Heroes and Hero-worship, is studied.

Third Term—Shakespeare's Cymbeline or As You Like It (Oxford University Press or Arden edition). Lectures on the miracle plays, moral plays and interludes, followed by a comparison of the Ancient Greek and the modern English drama.

Throughout the session training is given in the writing and criticism of letters and essays, which are frequent rather than long. Stress is laid upon the cultivation of a style in composition that shall be at once accurate, strong, and graceful.

### SOPHOMORE YEAR.

English literature of the Seventeenth and the Eighteenth Century, in alternate years, including the late Renaissance, Puritan, Restoration, Augustan and Georgian periods. In addition to the "gay science," the Shakespeare-Bacon and Ossianic controversies claim attention. Lectures on the relation of literature to art, criticism, esthetics, and the sciences, in order to throw light on the solidarity and scope of literature. Theme-writing and etymology are not neglected.

JUNIOR YEAR.

FIRST TERM—English literary history from the Norman Conquest to Spenser. Readings in Middle English as found in the interesting and valuable works of Thomas the Rhymer (1220-1298), Barbour, Androw of Wyntoun, and Henry the Minstrel, all of whom are independent of Chaucer.

In alternate years such medieval gems as are linked with the names of James I, Henryson, Dunbar, and Douglas (1474-1522).

SECOND TERM—Introduction to *Comparative Literature*. Some clues to a general theory of literary evolution from the days of primitive man. Can one principle be found that will account for the growth and decay of definite literary types—epic, dramatic, lyric—in all times and climes? Can the strictly scientific method lead to safe speculation upon the future of literature?

THIRD TERM—History of the English language; lectures on the origin of the English language, its Celtic, Teutonic, and classical elements, and its inflexions, with a glance at the way in which some words are raised to the peerage while others fall into disrepute. The psychology of persuasion is explained, and a distinction is drawn between the English of the newspaper, the novel, the pulpit, the bar, and the public platform. The principles of versification are briefly illustrated.

Students who elect Anglo-Saxon receive instruction in the parts of speech and in syntax, after which selections are read from Bede's History, King Alfred's Translations from Boethius and Orosius, and from the verse of Beowulf. The close relationship of Anglo-Saxon to our current speech is constantly kept in view, and Grimm's Law, with Verner's modification, is explained. Original research and independence of thought are fostered.

SENIOR YEAR.

*Anglo-Saxon*—Advanced students take up and study with some thoroughness Cynewulf's Christ. Lectures review the entire literature before the Conquest, and the Celtic literatures of Britain are not left in oblivion.

*Comparative Philology*—An introduction to the scientific study of language in order to learn a few fundamental principles of: (1) Semeiology; (2) Spoken language, including phonology and grammar; (3) Recorded language, including thought-writing, pictography, symbolic and ideographic writing. The course consists of lectures, but requires some private collateral reading.

*Oriental Studies*—For the special benefit of students of Comparative Philology, a course in elementary Sanskrit or elementary Hebrew is offered. In the one case stress will be laid upon Aryan philology, and in the other upon Semitic.

*Electives*—In the course of studies leading to the degree of A. B. (major study, English) Junior students may elect Greek or Latin, and are obliged to take at least one term of Analytical Geometry; Seniors may elect French, Sanskrit, or Hebrew, or they may take all three.

*Prize*—The works of some standard author, open for competition to all

regular Junior and Senior Students, are offered for the best critique of the poets of Kentucky.

Senior students who take the A. B. course (major study, English) are required to write a thesis on a topic approved by the Professor of English. It must display considerable research, and be untainted by plagiarism. An original poem of at least one hundred lines in either English or Latin may be offered as an alternative.

### Logic.

The Science of Logic; lectures on Pure Logic, in which Stoichiology and Methodology are explained and illustrated; explanations and illustrations of the analytics of Aristotle and the New Analytic of Sir William Hamilton; exercises in Figure, Mood, and Reduction; lectures on Fallacies and Sources of Error; lectures on Inductive and Analogical Reasoning; lectures on Evidences.

#### GRADUATE STUDY.

1. Gothic language and literature. 2. The origin and literary history of the Arthurian legends and romances. 3. Early Scottish literature, from Barbour (1375) to George Buchanan (1582), including Dunbar, Gavin Douglas, and Lindsay; or. 4. Such a topic as may obtain the sanction of the Professor of English, any one as a minor study. Candidates for the degree of A. M. (major study, English) are advised to take Gothic and any other study they may choose from the foregoing list. Without a previous knowledge of Anglo-Saxon, the study of Gothic is not recommended.

*Gothic.*—A course especially for those who desire to know English historically, in the Moeso-Gothic and its phonological relations both to early Aryan and to later Gothic or Teutonic languages. Initiation into some of the mysteries of Anglo-Saxon, Norse, and Gothic runes, followed by a brief discussion of the 3 x 8 formulation of the futhark.

SEMINAR. *Old English Legal Codes.*—A special course interesting alike to the prospective law student, the philomath, and the jurist. If deemed desirable, a brief preliminary training in Anglo-Saxon syntax.

## IV. DEPARTMENT OF MILITARY SCIENCE.

#### CAPTAIN BYROADE.

Instruction in this Department is both practical and theoretical.

The practical course embraces the U. S. Drill Regulations for Infantry, including the schools of the soldier, company, and battalion in close and extended order; ceremonies; so much of the Artillery Drill Regulations as pertains to the manual of the piece and mechanical maneuvers; signaling with flag and heliograph; guard duty and minor tactics.

Theoretical instruction embraces recitations in U. S. Drill Regulations for Infantry and Artillery; instruction in the preparation of reports and returns pertaining to a company; lectures on the organization and administration of the United States Army, and general principles governing in the Art of War.

All students are required to take this course, and proficiency in it is as requisite for graduation as in any other Department.

Students must provide themselves with the regulation uniform of cadet gray cloth, which can be purchased for about fifteen dollars. No other outer dress, excepting an overcoat, shall be worn on any occasion. From this rule students may, however, be exempt when laboring in the field or in the shops.

## V. DEPARTMENT OF CHEMISTRY.

PROFESSOR KASTLE.

The Chemical Department dates from the establishment of the institution. For many years it was under the direction of Dr. Robert Peter, who by his labors in analytical chemistry has probably done more than any other man to develop the abundant mineral resources of the State. The Department remained in the hands of Dr. Peter until 1887, when he resigned. Dr. E. A. Von Schweinitz was then appointed to the vacancy. He held the position during the collegiate year of 1887–1888, whereupon the present incumbent was appointed For many years the chemical laboratories and lecture-room occupied the eastern part of the main College building. In September, 1880, however, the Department Station building having been completed, the apparatus and equipment were removed from the laboratories in the Main Building to more suitable and beautiful rooms on the second floor of the Experiment Station Building. The lecture-room and the laboratories, qualitative and quantitative, of the Chemical Department are exceedingly well adapted to their purpose and are among the best constructed and most handsomely furnished of the rooms in the College. The qualitative laboratory contains three very large working tables, each of which can easily accommodate ten students. The quantitative laboratory is also well equipped with tables, hoods, water, gas, electricity, etc., and has desk room for at least fourteen students in all. The lecture-room is well lighted and heated and beautifully furnished and commodious, having a seating capacity of about seventy-five. Besides the laboratories and lecture-room, there are several other small rooms on the same floor set aside for the use of the Chemical Department—an instructor's office, a balance-room, and a store-room.

### APPARATUS.

The Department is well supplied with the commoner forms of chemical apparatus and chemicals. In addition to these it owns several of the more expensive pieces of apparatus, such as several exceedingly delicate balances for analytical work; a grand model Bunsen & Kirchoff spectroscope; platinum apparatus; a complete outfit for electro-plating; vapor density apparatus; a glass model ice-machine, etc. These of course will be added to from time to time, as the needs of the Department demand and the resources of the institution permit; as it is now, however, the equipment is such as readily to enable the student to obtain at first hand a good working knowledge of chemical science.

## COURSE IN CHEMISTRY.

The Chemical course is one of the several scientific courses offered by the College. It was first offered in 1894 with the view of preparing the student for life work in Chemistry, and also with the view of fitting him for the study of medicine and kindred professions. To the accomplishment of this purpose the following course of study, extending over a period of four years, has been adopted.

### STUDIES REQUIRED.

The first year is devoted to the study of English, German, Physiology, Free-hand Drawing, and Mathematics, including Plane Geometry, Trigonometry, and Algebra. The second year to German, Physics, Botany, Chemistry, and Mathematics, including Solid and Analytical Geometry and Calculus. The third year to Theoretical Chemistry, English, Calculus, French, and laboratory work on the Chemistry of the metals and on Qualitative Analysis. The fourth year to Quantitative Analysis, Organic Chemistry, Chemical Reading on advanced topics, and to Chemical Research, History and Political Economy, Logic and Mental Philosophy.

For further information as to requirements, the Schedule may be consulted, page 59.

### THE TRAINING IN CHEMISTRY PROPER.

The study of Chemistry proper, as outlined in the above, is sufficient in its scope to bring the student into close contact with the great fundamental truths of the science and to make him enthusiastic and capable in his profession.

The course in General Chemistry, extending through the second and third terms of the second year, consists of lectures and recitations five times weekly on the non-metals and their compounds and the simpler laws of chemical change. The lectures are abundantly illustrated by suitable and instructive experiments; the laboratory work is carefully directed, and the student receives every possible encouragement to do excellent work.

In the third year the study of Chemistry is resumed, with laboratory work and Theoretical Chemistry. The study of Theoretical Chemistry, consisting of lectures, recitations, and readings five times weekly throughout the year, is intended to acquaint the student with the greatest generalizations and theories of modern chemistry and their historical development. In this connection about fifty lectures are delivered annually upon the following general topics: Ten upon the Atomic Theory, its development, and the methods at present used in the determination of atomic weights; fifteen upon the Compounds of Carbon, Isomerism and Structural Formulæ; ten upon the History of Chemistry; five upon the Periodic Law; five upon the Spectroscope, Spectrum Analysis, and the Chemistry of the Heavenly Bodies; five upon the more important current chemical investigations.

By way of supplementing the work of the lecturer, students pursuing this course will be required to do a certain, rather liberal, amount of general reading upon the matter treated of in the lectures or upon such other topics as may be assigned by the instructor. For this purpose the nucleus of a

chemical library has been formed, which may be freely consulted by any or all students in the College, and the leading chemical journals of this and other countries will there be kept on file. The broadening influences of such a course of study can scarcely be overestimated, and the students who complete it satisfactorily will find themselves, in some measure at least, abreast of the highest and best chemical thought of our time.

The laboratory work during the first term of the third year is devoted to the study of the metals and their more important compounds, and to qualitative analysis. This work is intended to supplement the work of the first year upon the non-metals, and also to familiarize the student more fully with the commoner methods of chemical manipulation and practice. The laboratory work of the first term will be followed up during the second and third with laboratory work in quantitative analysis, by means of which the student learns the value of precise and accurate work and the constancy and definite character of chemical reactions. The chemical work of the last year will consist of such special work as the student may elect to pursue, together with the preparation of a thesis embodying the results of this special work. The object of such special arrangement is to perfect him in that particular branch of the science for which he shows a liking or a particular talent. In this connection it may be well to state that facilities are offered for special work along the following lines: Theoretical and Physical Chemistry, Organic Chemistry, Agricultural Chemistry, Physiological Chemistry, general analytical work, and special analytical work on fertilizers, iron and steel and fuels.

### CHEMISTRY REQUIRED IN OTHER COURSES.

Instruction in Chemistry in other courses of study, such as the Scientific, Classical, etc., is designed to meet the special needs of the student in these several directions.

In the Classical Course the study of this science extends over five months, five times weekly, and is intended simply to introduce the student to the subject by the way of general education.

In the Scientific Course the work extends over ten months. A portion of this time is devoted to the study of the metals and qualitative analysis by means of laboratory work. In the course of Mechanical Engineering the instruction is adapted as completely as possible to the needs of students in this department. Instruction in chemistry in this course extends over a period of two terms, five months of which are devoted to the study of the non-metals and their compounds; five to the chemistry of the metals with special reference to the properties which render them useful to the mechanical engineer, and also with reference to their mode of occurrence in nature and the methods of obtaining them from the ores.

For Students in Civil Engineering a course in chemistry has been provided as follows: General chemistry, one term; laboratory work on the metals, one term; quantitative analysis, one term.

For the benefit of students of Agriculture a special course in Agricul-

tural Chemistry has been arranged, the general aim of which is to acquaint the student with the chemistry of those elements which enter into the composition of plants, and which are essential to their life and growth. A study of the composition of the soil, air, and water, and their several relations to the plant as sources of plant food, forms a large and important part of this work. Also the chemistry of tillage, irrigation, and rotation of crops, and the composition and value of commercial fertilizers and manures.

The instruction in Chemistry is also adapted as fully as possible to the needs of students in Biology. Instruction in this branch extends over two terms, five times weekly. The first half of the time is devoted to the study of Elementary Chemistry; this is followed by laboratory work in the afternoon upon those elements which are regarded as essential to living things, animal and vegetable.

## VI. DEPARTMENT OF MATHEMATICS AND ASTRONOMY.

PROFESSOR WHITE, ASSISTANT PROFESSOR JOHNSON.

### PREPARATORY.

A thorough knowledge of Arithmetic, of Algebra, through quadratic equations, as presented in Fisher and Schwatt's Higher Algebra, and of Plane Geometry as presented in books I. to V. inclusive of Beman and Smith's Geometry, is required for admission to the Freshman Class in Mathematics.

### FRESHMAN CLASS.

FIRST TERM—Wentworth's Plane Trigonometry.

SECOND TERM—Beman and Smith's Solid Geometry.

THIRD TERM—Fisher and Schwatt's Higher Algebra, from Chap. XXV.

### SOPHOMORE CLASS.

FIRST TERM—Nichols' Analytical Geometry begun.

SECOND TERM—Nichols' Analytical Geometry continued; Church's Descriptive Geometry begun.

THIRD TERM—Nichols' Analytical Geometry completed. Church's Descriptive Geometry completed; Osborne's Calculus begun.

### JUNIOR CLASS.

FIRST TERM—Osborne's Calculus continued.

SECOND TERM—Osborne's Calculus completed.

### SENIOR CLASS.

FIRST TERM—Spherical Trigonometry and Astronomy.

SECOND TERM—Young's Elements of Astronomy begun.

THIRD TERM—Young's Elements completed.

## VII. DEPARTMENT OF MODERN LANGUAGES.

PROFESSOR WERNICKE.

### German.

The courses offered in German are:

G1: Three consecutive terms in elementary German.

Gs: An introduction to scientific prose (one term).

G2: Continuation of G1, involving an introduction to German literature, and practice in composition (two terms).

G3: Advanced composition. Introduction to various styles.

Gh: History of German literature based on the national history.

Gc: Advanced conversational exercises (one term).

Gl: Study of some author (Schiller, Lessing, etc.).

Gph: Introduction to philology of Germanic languages.

All classical and scientific students take G1, Gs, and G2, which are given annually. Candidates for the Master's degree, if German be one of their minor studies, will be assigned G3, Gh, or Gc; if German be their only minor study, additional work may be required. Candidates for the Master's degree who select German as their major study will take two of the courses G3, h, c, l, and ph; and present a thesis written in German (about 4,000 words). Courses Gl and Gph are primarily designed for this class of students, and will consist of lectures and weekly reports on individual work.

### Romanic Languages.

This Department offers:

F1: Three consecutive terms in elementary French, taking the student through the main irregular verbs, and leading to a fair reading knowledge. Prerequisite: Some experience in the study of languages, such as is acquired in G1 *plus* G2, or in a two or three years' course in Latin.

F2: Introduction to French literature. Syntax and Composition (three terms).

F3: Advanced composition (one term).

Fh: History of French literature, consisting of lectures and weekly reports on collateral reading (two terms).

Fc: Advanced conversational exercises (one term).

S1: Elementary Spanish (two terms).

S2: Advanced Spanish (one term).

I1: Elementary Italian.

I2: Advanced Italian.

All classical and scientific students take F1, the former also F2. Candidates for the degree of M. S., if French be one of their minor studies, will be assigned F2; if French be their only minor study, further work may be required. Candidates for the degree of M. A. will take Fh if French be one of their minor studies; F3 *plus* Fh if it be their only minor. In addition thereto, those who select French as their major study will take either Fc, or

S1 *plus* S2, or I1, and will present a thesis written in French (about 4,000 words).

The text-books in this Department are frequently changed, and a large portion of the instruction in all classes is independent of the manual adopted. Texts recently used are:

G1: Becker's Elementary German; Joynes-Meissner's and Whitney's Grammars; Thomas & Hervey's Reader; Carmen Sylva's Aus meinem Koenigreich.

Gs: Hodges' Scientific German; Gore's Science Reader.

G2: Hoffman's Historische Erzählungen; Freytag's Luther; Schiller's Wallenstein Maria Stuart, etc.; Scheffel's Trompeter; Freytag's Soll und Haben; Harris' Composition.

G3; Lessing's Nathan. Mina von Barnhelm, Laokoon, etc.

Gh: Bernhardt's Litteraturgeschichte.

Gl: Klenze's Gedichte.

Gph: Paul's Mittel-hochd. Grammatik; Wackernagel, Edelsteine.

F1: Frazer & Squair's Grammar; Edgren's Grammar; Verne's Michael Strogoff, Tour du Monde; Van Daell's Introduction to French Authors; Fontaine's Napoléon.

F2: Loti's Pécheur d'Islande; Lacombe's Petite Histoire; Rostrand's Cyrano de Bergerac; Whitney's Grammar, Part II; Grandgent's Composition; Luquiens' Places and Peoples; Herdler's Scientific French Reader.

Fh: Demogeot's and Aubert's Litérature Francaise.

S1: Edgren's Grammar; Matzke's Reader.

S2: Same, Knapp's Readings; Alarcon's El Capitan Veneno.

I1: Grandgent's Grammar; Bowen's Reader.

I2: Goldoni's Comedies; Pellico's Prigioni.

## VIII. DEPARTMENT OF GREEK AND LATIN.

PROFESSOR NEVILLE, ASSISTANT PROFESSOR BLANTON.

### Latin.

#### PREPARATORY.

*First Session*—Smiley & Storke's Beginner's Latin Book, the study involving a daily exercise in inflexion and in translation from and into Latin on the blackboard; Viri Romæ.

*Second Session*—Ten lives of Nepos; five books of Cæsar; Daniell's New Latin Composition; Creighton's History of Rome; Guerber's Myths of Greece and Rome.

#### FRESHMAN CLASS.

Six orations of Cicero; selections from Ovid, with instruction in scanning; the first and twenty-first books of Livy; Johnson's Private Life of the Romans.

#### SOPHOMORE CLASS.

Six books of Virgil; Cicero De Senectute; the Captives of Plautus or the Phormio of Terence; Sallust's Conspiracy of Catiline.

#### JUNIOR CLASS.

Horace (except a part of the Epodes and most of the Satires), with the scanning of the more common metres; letters of Cicero and of Pliny; the first half of Bradley's Arnold's Latin Prose Composition.

#### SENIOR CLASS.

Tacitus—The Germania and the Agricola; the third, seventh, eighth, and tenth Satires of Juvenal; or, instead of the seventh and eighth, an essay of Seneca's; poems of Catullus; the second half of Arnold's Composition; Wilkin's Sketch of Latin Literature.

## Greek.

### PREPARATORY.

*First Session*—White's Beginner's Greek Book, with a daily exercise in inflexion and in translation from and into Greek on the blackboard (all Greek to be written with the accents).

*Second Session*—Moss' Greek Reader; five books of Xenophon's Anabasis; Oman's History of Greece.

### FRESHMAN CLASS.

Six books of the Iliad: selections from Herodotus; Plato's Apology and Crito; exercises in Greek syntax.

### SOPHOMORE CLASS.

Four orations of Lysias; four of Demosthenes; Xenophon's Memorabilia, or dialogues of Lucian; exercises in syntax and prose composition.

### JUNIOR CLASS.

Two books of Thucydides; poems of Theocritus, Bion, and Moschus.

### SENIOR CLASS.

Three dramas (Prometheus, Medea, Œdipus Rex or Antigone.; Jebb's Sketch of Greek Literature.

The curriculum leading to the classical degree of A. B., and set forth in the Schedule on page 69, includes English, Greek and Latin, French and German, History, Political Economy, Metaphysics, Mathematics and Physical Science. The grouping of these studies is designed to meet the needs of those students whose tastes and aptitudes incline them to literature rather than to science; who seek not knowledge alone but culture as well; and who, moreover, desire a course of studies suited to those who are to prepare themselves for a profession, and to become teachers, preachers, physicians, lawyers, journalists, writers or scholars, or, it may be, legislators or authors.

To this brief statement of the objects kept in view in making up this course of studies it is due to this Department, and not meant to be invidious, to add, that statistics published annually by the U. S. Commissioner of Education show that, even in this country where scientific and the so-called practical studies are so strongly and so justly recommended and encouraged, that even here the classical course is from three to five times more popular* than any other; while the English, the French, and the Germans, who in letters, arts, and arms rank highest in the scale of nations, devote far more attention to these studies than we. Indeed, as showing the educational trend of the most intelligent people that has ever existed, it is a fact of impressive significance that a vast *Thesaurus of the Latin language*, the product of five leading universities of the Germans, and therefore of the world, Berlin, Leipzig, Goettingen, Munich and Vienna, is now appearing from the press of Teubner. This magnificent and monumental work is to consist of twelve volumes quarto, each as large as Webster's Unabridged, and to sell, when durably bound, for more than $200 a copy. No other language has had such a dictionary, and this Thesaurus is the greatest contribution ever made to the study of that language, which to every highly civilized people is more important than any other except their own; which has formed nearly half of ours and more than half of three others; and which, therefore, cannot, in any rational scheme of education, be neglected or disparaged, but must retain its place if not its primacy among the most useful studies that man can pursue.

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*In 1902 there were in the colleges, universities and technical schools of the United States 6,087 students in general science; 44,779 in classical studies: 14,237 in other culture studies; 10,817 in all engineering courses, and 1,508 in agriculture.

The Professors of this Department offer courses of study equal to those of the best land-grant colleges, courses as long and as varied as the grade of their students and other limitations allow. In offering them they announce that their method of instruction, so far as it is distinctive, rests on the assumption that ability to write a language well is the infallible test of a real knowledge of it. Unusual attention is therefore given to Greek and Latin composition, the first session being devoted almost entirely to the writing of exercises. This leads directly to an accurate knowledge of the forms and meanings of words, of the rules of syntax, and of the idioms. Every student of the classes in grammar is required daily to translate on the blackboard an exercise from Greek or Latin into English, and another from English into Greek or Latin, and then to write out declensions and conjugations, with careful attention to the length of syllables and to accentuation. His work is then rapidly corrected by the teacher, who in making his corrections supplements the lesson of the text-book with instruction on the order of the words, on synonyms, on the derivation of English words suggested by the words of the exercise, and on other pertinent matters. This process involves great labor for the student and drudgery for the teacher, but it leads to a mastery of the grammar and to much more.

The second session is spent mostly in reading the easy Latin of Viri Romæ, Nepos, and Cæsar, or the easy Greek of the Reader and Xenophon, considerable attention being still directed to the writing of exercises. The student is encouraged in the habit of first reading the sentences in the Greek or Latin order of the words, and of then translating them in the English order and idiom. The translations are partly oral, partly written.

During the remainder of the courses the bright and diligent student proceeds from the easier authors to the most difficult, enlarging his vocabulary, extending and sharpening his knowledge of forms, syntax, and idioms, incidentally directing his attention to meters, geography, history, mythology, and antiquities, and perpetually and supremely to the effort to find the best English expressions for the Greek or Latin thought; for, while more than a third, and that too unspeakably the most difficult third, of our own magnificent language is derived from Greek and Latin, and while the study of these tongues is therefore intensely practical to those who speak English, and indispensable to all who would thoroughly acquire it, yet it is the intellectual training to be had from the proper translation of the Greek and Latin authors that the advocates of classical learning find their amplest justification and defense, their most cogent plea. The ceaseless quest for the clearness, force, and beauty of the best English, in order to find an equivalent for the best Greek or Latin, calls into play every faculty of the mind and gives to classical studies an educational value which, we insist, no substitute can equal.

The Germans are admitted to be the leading educators of the world. In the nine years' curriculum of their 443 gymnasia, which are their best secondary schools (corresponding to our colleges, but conferring no degrees and with fewer studies far better taught), they assign to the study of Greek and of Latin a higher educational value than to any other study* In the 227 Prussian gymnasia, for example, Latin, by the time devoted to it, is valued at 62, Greek at 36, and mathematics, the next highest study, at 34. In the other parts of Germany the difference is greater still. In the Saxon gymnasia, Latin is valued at 72, Greek at 41, mathematics at 33; in those of Württemburg, Latin at 81, Greek at 40, mathematics at 33. Similarly, in the great public schools of England, including Oxford and Cambridge (with a higher estimate of mathematics, however), as well as in the Lycées, the leading secondary schools of France, the utility of the study of the Latin language as a medium of intellectual training and culture is everywhere recognized as supreme. And the results have justified the estimate. A system of education by which a host of great men, from Bacon to Gladstone, have been fitted for their splendid careers, is assuredly not a bad one, and in that system Greek and Latin have always held the first place.

* "The classical literature is, and will continue to be, the source of all our culture, It must remain, therefore, not only an indispensable but by far the most important study in our higher schools."—Frederic Gedike. And yet the German language owes little to Greek and Latin, while the English owes to them nearly half the words. The inference of course is that the study of Greek and Latin is far more useful to an American or an Englishman than it can be to a German, for the German derives culture from the study and the American or Englishman both culture and a knowledge of his language.

The National Commissioner of Education reports that in the secondary schools of the United States there were, in 1889-1890, 100,144 students of Latin; in 1897-1898, 274,293, an increase of 174 per cent., and greater than any other study; that in the same nine years the students of Greek increased from 12,869 to 24,994, an increase of 94 per cent.; and that in 1897-1898, 49.44 per cent., almost exactly one-half of all the students of secondary schools, were studying Latin. When the immense number of classical students in the 629 colleges and universities of the United States is added to the 300,000 and more now in our secondary schools (314,856 in 1900) it will be plain that there is no decline in the demand for classical learning.

While no wise man will seek to disparage or unduly to exalt any branch of knowledge, it is not invidious to say that though the vast expansion of science during the wonderful nineteenth century has contributed enormously to the comfort and the glory of man, yet an immense majority in the civilized nations will continue to feel more interest in man and his doings than in matter and its properties, more in literature than in science, and more in the application of science than in its principles and processes.

## IX. THE ACADEMY.

The Academy is described after the Collegiate Department.

## X. DEPARTMENT OF PEDAGOGY.

PROFESSOR ROARK.

The Normal Department of the State College exists under the authority of acts of the General Assembly approved April 23 and April 29, 1880. Section 7 of the first act briefly defines the object for which the Department was established, "a Normal Department or course of instruction for irregular periods, designed more particularly, but not exclusively, to qualify teachers for common and other schools, shall be established in connection with the College." The second act provides the necessary endowment to make the Department effective.

Acting under the clause above quoted from the incorporating act, the authorities of the College have organized two distinct but closely related sub-departments of work for teachers. These are the Normal School and the College course in Pedagogy; the one designed to prepare teachers for the elementary schools; the other, for secondary schools and colleges.

In this arrangement the State College of Kentucky is unique and possesses a distinct advantage. Through the Normal School it comes into close and sympathetic touch with the masses of the teachers throughout the State; and through the college course it comes into vital contact with the more advanced teachers and the higher schools.

Many students who come to the Normal School are led, as the result of what they see of the college work, to undertake an advanced course. The Normal School thus discharges a function whose value cannot be overestimated, in that it introduces many of the most intelligent youth of the State to the facilities which the College can offer them.

### THE COLLEGE COURSE IN PEDAGOGY.

In 1893 the College authorities, in response to a strong demand for advanced instruction for teachers, organized a full collegiate course with

Pedagogy as a major. This action put the State College on a par with other institutions in the North and West, for there are few State universities in those sections that do not support a department for the advanced teaching of education.

This course is co-equal in number and difficulty of subjects, in the time required for its completion, and in disciplinary and cultural value, with the other full collegiate courses. The purpose of the course is to fit young men and women for the best service as teachers in high schools, academies, and colleges.

To realize this purpose the course offers, in addition to the usual amount of work in science, language and mathematics, specialized instruction in the following subjects, which give to this course its distinctive character:

### GENERAL PEDAGOGY.

In the third term of the Sophomore year the student is given a general view of the whole field of Pedagogy through a synoptic outline of the subject. The purpose is to present enough of each topic in Pedagogy to show the trend of each important question in modern education. The work is carried on both by lectures and class discussions.

### PSYCHOLOGY.

In the first term of the Junior year the subject of Psychology is presented, chiefly with reference to its value to the teacher. Psychology is treated as a basis of the science of education and the art of teaching. No time is spent in mere speculative discussions, but from the very first the effort is made to connect the subject vitally with the teacher's actual work in the school. Especial attention is given to the mind's functions in Acquiring, Assimilating, and Expressing. The value of Psychology also is shown as the basis of Methodology, and of Educational Economy.

The text-book is "Roark's Psychology in Education."

In the second term of the Junior year a few of the more valuable topics in higher Psychology are taken up. The special Pyschology of some of the advanced branches will be studied.

The work will be by library research, lectures, and class discussions.

### EDUCATIONAL ECONOMY.

In the third term of the Junior year the different subjects comprised under the general term "Educational Economy," are taken up in detail. No text-book is used, but the well-stocked library of the Department is put at the service of the students, and from all available sources they are expected to work up such subjects as (1) the organization and administration of the individual school, in country and city; (2) the organization and administration of State and city systems of schools; (3) the course of study; (4) fatigue; (5) buildings and grounds; (6) control and discipline; and (7) the correlation of the school and the community.

These topics are discussed with constant reference to their underlying psychological and sociological principles.

This term's work is particularly suited to those who are preparing for principalships and county or city superintendencies.

### METHODOLOGY.

Through the first term in the Senior year the student carries the work in Methodology, all of which is based directly upon Psychology.

The principles of general method, and the special methods of each school subject are thoroughly discussed, and much drill is given in the making of lesson-plans.

The text book used is "Roark's Method in Education."

### THE HISTORY OF EDUCATION.

The second term of the Senior year is devoted to the History of Education.

It is found much the best plan to place this study last in the curriculum, because by the time it is taken up the students in Pedagogy are sufficiently familiar with the different divisions and problems of the subject to understand and interpret the history of educational development.

The text-book used is "Seeley's History of Education," but in this subject the library is fully used.

### PROFESSIONAL READING.

For a student to get the best results from the study of any subject he should read as widely as possible in the literature of the subject. This is especially true of education, which has such a wealth of literature and touches closely so many other subjects. One term, and when possible more time, is devoted to the reading and analysis of such books as Butler's "The Meaning of Education," Jordan's "The Care and Culture of Men," Hanus' "Educational Aims and Educational Values," Henderson's "Education and the Larger Life," Hinsdale's "Jesus as a Teacher," etc.

The department library is well stocked with the best pedagogical literature, and pupils are urged to make constant use of it.

### OBSERVATION WORK.

As much time as possible is used by the students visiting schools in the city of Lexington and the rural districts near by. Reports upon this observation of the work of experienced teachers are prepared and handed in by each pupil, and form the basis of class discussions.

### THESES.

Each candidate for the Bachelor's Degree in Pedagogy is required to write a thesis upon some theme assigned by the Dean. This work must be done acceptably and a copy of the thesis left with the Department.

## XI. DEPARTMENT OF CIVIL ENGINEERING.

PROFESSOR BROOKS.

The course in Civil Engineering is planned to acquaint the students with the knowledge of the subjects necessary to enable the civil engineer to develop himself into a skilled practitioner of his profession in any of its several branches. So far as is possible, the importance of each subject taught is illustrated by its application to some work similar to that which is met with in actual practice. An effort is made to render the course valuable, not only for its professional uses, but also from an educational standpoint; therefore, while the student is learning each subject, both theoretically and practically, the training of his mind as well as the needs of his profession is kept in view. In addition to the purely technical matters included in the course, provision is made for the study of English, History, and Political Economy.

### EQUIPMENT.

The Department of Civil Engineering occupies the second floor of Engineers' Hall, which contains an office and recitation and drawing-rooms for the accommodation of classes of twenty-five students. The drawing-room is equipped with tables, boards, drawing paper, and all the larger and more expensive drawing instruments, which are at the disposal of all students. The surveying instruments belonging to this Department are of the highest grades of the various makers, and among them are included five transits—one each by Buff and Berger, Heller & Brightly, Keuffel & Esser, Mahn, and Ware; three levels, by Gurley, Brandis, and Seelig & Kandler; a compass by Gurley; a plane-table by Keuffel & Esser, a precise pantagraph, and a solar instrument by Saegmüller, together with level and stadia rods, tapes, and other minor accessories. The library for the use of students in engineering contains a well selected supply of standard literature and periodicals pertaining especially to Civil Engineering.

The technical studies in the Course of Civil Engineering fall under the heads of Drawing, Surveying, Construction, Applied Mechanics, Bridge and Machine Design, and Sanitary Engineering.

### LABORATORIES.

Instruction is given in the Physical Laboratory during the first term of the Sophomore year, and in the Chemical Laboratory during the second term of the Junior and Senior years.

### DRAWING.

The work in drawing is begun in the first term of the Freshman year, and consists of free-hand sketching from models, engineering structures, and from drawings, and in practice in the use of drafting instruments. In the Sophomore year the time is occupied in mapping, with exercises in topography, and especial attention is given to the rapid and accurate formation of Roman and other appropriate styles of letters. In the second term,

four hours a week are devoted to the solution of problems in Descriptive Geometry. During the winter of the Junior year a topographic map is plotted from notes of a survey made by the class during the autumn. Such a map made by the present Junior class embraces four city blocks, farm of about two hundred acres, and was plotted on a scale of two hundred feet to an inch. One hour a day during the second term is devoted to problems in stone-cutting. A topographic map of railroad location, with cross sections and profile, is completed in the third term, and graphic analyses of frame structures are made during the year. In the Senior year the work in drawing consists of problems in design and of construction details.

*Text-books:* Church's Descriptive Geometry; Siebert & Biggin's Stone-Cutting; Reinhardt's Technique of Mechanical Drafting.

### SURVEYING.

The course in Surveying is begun in the second term of the Sophomore year, with the study of text-books on the theory of plane surveying, supplemented by ample practice in the solution of numerical examples. This is followed by daily field practice in the use and adjustment of surveying instruments, with exercises in leveling, determination of inaccessible distances, and in farm surveys. In the first term of the Junior year a topographic survey of a tract of land adjacent to the College property is made, based on a system of accurate triangulation. In the second term the theory of railroad surveying is studied, especial attention being given to spirals and other modern features of railroad practice. A line of railroad is run and cross sectioned, and an estimate made of the cost of construction. The study of Geodesy is taken up in the Senior year, embracing the theory of adjustment of a system of triangulation and the methods of determining latitude, longitude, and azimuth. The State College system of triangulation has been begun and will be yearly perfected and extended by the Senior classes.

*Text-books:* Merriman and Brooks' Hand-book for Surveyors; Brooks' Street Railway Location; Goodwin's Railroad Engineer's Field Book: Merriman's Geodetic Surveying.

### CONSTRUCTION.

The methods of Construction are taught by lectures on limes, cements, wood, steel, and other building material; on principles of foundations on land and under water; on masonry walls and dams; on roads, railroads, and street paving; on the theory and erection of arches; on tunneling, and on the construction of high steel buildings. The lectures include descriptions and sketches of notable existing structures, and short excursions will be arranged for the class as often as possible. The latest methods of conducting tests of cement, iron, steel, wood, brick and other material are practised by each student in the well-equipped laboratory belonging to the College.

### APPLIED MECHANICS.

The work in applied mechanics extends over the Junior and Senior years, and includes the theory of the strength and elasticity of beams, columns, and shafts; of stresses in framed structures and arches; of the theory

of dynamos and steam engines and its application to pumping and hoisting machinery and to locomotives.

*Text-books:* Merriman's Mechanics of Materials; Unwin's Elemeuts of Machine Design; Merriman & Jacoby's Roofs and Bridges, Parts I and II; Holmes' Steam Engine; Houston & Konnelly's Electro-Dynamic Machinery; Barr's Pumping Machinery; Bowser's Analytic Mechanics.

### BRIDGE DESIGN.

The course in Roofs and Bridges is begun in the first term of the Junior year and continues through two years. The theory of computation of stresses by both analytical and graphic methods is thoroughly taught from the text-book and numerous numerical examples. At the beginning of the Senior year the design of bridges is begun, and the method of instruction is to proceed from the simple to the complex. The outline and details of existing structures are examined, and the student becomes familiar with drafting-office methods by constant reference to working drawings.

*Text-book:* Merriman & Jacoby's Roofs and Bridges, Part III.

### SANITARY ENGINEERING.

The work in Hydraulics includes the study of the flow of water through orifices, pipes, and large channels; the theory and tests of water motors and the measurement of power. In Sanitary Engineering the course comprises the consideration of the separate and combined systems of sewerage; the methods of sewage disposal, and the collection, purification, and distribution of a system of water supply.

*Text-books:* Merriman's Hydraulics; Folwell's Sewerage.

## XII. DEPARTMENT OF MECHANICAL AND ELECTRICAL ENGINEERING.

PROFESSORS ANDERSON AND FAIG, ASSISTANT PROFESSOR WILSON.

### EQUIPMENT AND FACILITIES.

This department was organized August, 1891, and is now one of the most completely equipped in the College. Mechanical Hall contains a floor area of about 20,000 square feet, is constructed of stone and pressed brick, and is well furnished with modern conveniences for work in Mechanical and Electrical Engineering. The building contains three recitation-rooms, two drawing-rooms, three offices, a wood and pattern shop, two boiler-rooms, wash-room, tool-room, engine room, two machine-shops, blacksmith shop, foundry, and two large rooms devoted to experimental engineering A two-story brick building is well equipped for work in photometry and magnetic measurements. The building is isolated, so that absolute work may be carried on. A first-class technical library is at the disposal of all students in Engineering. The equipment of the different rooms is briefly described below:

The drawing-rooms contain drawing-tables. drawing-boards, curves,

scales, T-squares, and other special drawing apparatus, to accommodate one hundred students.

The engine room contains a 10-inch by 24-inch Hamilton-Corliss non-condensing engine, which supplies the motive power for all the work-shops.

The wood-shop contains twenty benches, each with a complete set of wood-working tools, twenty-three wood turning lathes, each with a complete set of turning chisels, band-sawing machines, universal wood-worker, wood-trimmer, hand-mortiser, fret saw, double circular saw, and grindstone.

The foundry contains a 30-inch cupola furnace, with a capacity of a ton of metal per hour, a brass furnace, twelve complete sets of molders' tools, twelve benches; also ladles, clamps, core-room, core-oven, pattern-rack, and the tools used in a practical foundry.

The blacksmith shop is equipped with eighteen forges. The down-draft system is used. Each forge is furnished with an excellent set of blacksmith tools. A power hammer is available for heavy iron or steel forging.

The forge shop represents the best modern practice.

The machine-shop contains six lathes, one milling machine, one self-feed drill, one hand-feed drill, one planer, one shaper, one tool-grinder, one dry emery grinder, one wet emery grinder, one universal grinding machine, two sensitive drills, and twelve iron vises and benches for vise work in metal, an air compressor and pneumatic tools.

The tool-room is equipped with a fine assortment of superior tools for work in iron, steel, brass, and wood, and contains such stock and supplies as may be used in constructions in the mechanical laboratories named above.

The wash-room contains lockers for one hundred students, and is supplied with marble basins.

The boiler-houses contain, respectively, a fifty horse-power Babcock and Wilson water-tube boiler, a Dean Bros.' No. 3 steam pump, and a fifty-five horse-power tubular boiler, and a Davidson No. 3 steam pump.

The Experimental Laboratory is the best equipped in the South, and besides being well supplied with steam engine indicators, planimeters; steam gauges, pyrometers, reducing motions, scales for measuring, micrometer, and vernier calipers, thermometers, calorimeters, sieves, cement samplers, scales for weighing, extensometers, water-meters, etc.; it contains a thirty five-horse-power Westinghouse compound engine, a forty horse-power Houston, Stanwood & Gamble cross compound throttling engine, a twenty five-horse-power automatic cut-off engine, a ten-horse Corliss Engine, a thirty five-horse-power Buffalo automatic cut-off engine, a ten kilo-watt Crocker-Wheel dynamo, an eight and a half kilo-watt Edison dynamo, a nine kilo-watt General Electric Company multipolar dynamo, a three and a half kilo-watt electro motor, a three-fourths kilo-watt electric motor, a Bracket-cradle dynamometer, portable voltmeters, and ammeters for continuous and alternating currents, wattmeters, photometers, galvanometers, instruments for absolute measurements of E. M. F. resistance and current, a Wood thirty-three kilo-watt alternator, a switchboard equipped with the most

modern instruments, resistance boxes, and many instruments for refined investigation.

The laboratory also contains a number of friction brakes, a Flather hydraulic dynamometer, a 1,000-pound United States standard cement testing machine, and a 100,000-pound Riehle testing machine.

A double engine of fifty-horse power and an automatic cut-off engine (Atlas) have recently been added.

The equipment of the laboratory is such that many problems relative to Steam and Electrical Engineering may be discussed very comprehensively.

### COURSE OF STUDY.

The training given in this course, both practical and theoretical, is intended to prepare young men for positions of responsibility and trust in mechanical engineering work. The practical work extends over a period of two years, and includes the most important principles and operations in bench-work in wood, wood-turning, pattern-making, foundry-work, iron and steel forging, and hand and machine work in metal.

The theoretical work during the first two years consists of a thorough training in English, Chemistry, Mathematics, Physics, and Drawing, and during the last two years the fundamental principles of boiler, machine, dynamo, and engine design are taken up. By a careful solution of practical problems the student becomes familiar with the process carried on by the operators and designers of successful machine-building plants.

The course in Mechanical Engineering involves three separate lines of work.

1. *Mechanical Engineering*, the object of which is to give that training necessary to fit men to be operators and designers of steam machinery and manufacturing plants.

2. *Chemical Engineering*, intended especially to give the knowledge requisite for the successful operation of iron and steel plants and the analysis of iron, steel, coals, and refractory substances.

3. *Electrical Engineering*, in which the theory, design, building, and operation of dynamos and motors are predominant.

Particular attention is paid to the construction of power and lighting stations.

The course of study in Mechanical and Electrical Engineering extending over a period of four years, leads to the degree B. M. E. (Bachelor of Mechanical Engineering). The advanced degree of Mechanical Engineer may be obtained by resident students in one year after taking the degree of B. M. E. from The State College of Kentucky or any other institution of equal requirements, they having successfully carried on the work laid down, passed a satisfactory examination, and presented an acceptable thesis. The advanced degree may also be taken in three years after obtaining the degree of B. M. E., provided the student has been engaged during the period of

three years in practical engineering work, passes a satisfactory examination at the College, and presents an acceptable thesis.

At least two years' notice must be given to the Faculty that post-graduate work is done, and the work must be approved by the Faculty.

### FRESHMAN YEAR.

*Technical Instruction*—Twenty-six weeks, three hours per week. (*a*) Recitations on the forms of wood-working tools and the cutting and peculiarities of timber. (*b*) Lectures on the operation of the various forms of wood-working machinery. (*c*) Lectures on pattern-making, molding and casting.

*Mechanical and Free-Hand Drawing*—Twenty-six weeks, six hours per week, and ten weeks, ten hours per week. (*a*) This drawing includes free-hand sketches, drawing from copies and models, using parts of machines in the Mechanical Laboratories as models. (*b*) Free-hand lettering. (*c*) Exercises in tinting and shading. (*d*) Tracing.

*Shop-work*—Thirty-six weeks, twelve hours per week (*a*) Bench-work in wood, including exercises in the following operations: Planing, sawing, rabeting, plowing, notching, splicing, mortising, tenoning, dove-tailing. framing, paneling, and the general use of carpenters' tools. (*b*) Wood-turning, involving the various principles of lathe-work in wood. (*c*) Pattern-making, which gives the student discipline in the construction of patterns for foundry work. (*d*) Foundry work, including the various operations of molding, core-making, and the molding of iron and brass.

*English*—Thirty-six weeks, five hours per week.

*Algebra*—Ten weeks, five hours per week.

*Solid Geometry*—Nine weeks, five hours per week.

*Trigonometry*—Thirteen weeks, five hours per week.

*Physics*—Twenty weeks, five hours per week.

### SOPHOMORE YEAR.

*Technical Instruction*—Sixteen weeks, one hour per week. (*a*) Lectures on the handling of iron and steel in forging, and the methods of tempering and annealing steel. (*b*) Lectures on modern machine-shop practice.

*Mechanical Drawing*—Sixteen weeks, four hours per week; thirty-six weeks, five hours per week. (*a*) Drawing the parts of machines and complete machines to scale. (*b*) Geometric and Descriptive Geometry, problems. (*c*) Design of machine details.

*Shop-work*—Thirty-six weeks, twelve hours per week. (*a*) Exercises in iron and steel forging. (*b*) Exercises in vise-work in metal. (*c*) General machine work; including screw-cutting, drilling, planing, and the milling of iron, brass, and steel.

*Descriptive Geometry*—Nineteen weeks, five hours per week.

*Physical Laboratory*—Seventeen weeks, five hours per week.

*Analytical Geometry*—Thirty-two weeks, five hours per week.

*Chemistry*—Nineteen weeks, five hours per week.

*Surveying*—Nineteen weeks, three hours per week.

*Metallurgy*—Twelve weeks, six hours per week. The above includes the study of fuel and refractory substances, and the process employed in puddling iron and making steel.

*Calculus*—Ten weeks, five hours per week.

### JUNIOR YEAR.

*Kinematics*—Fifteen weeks, five hours per week. Under this head are studied the velocity ratios in various motions, construction of gears, cams, quick-return motions, and the manner of designing trains of mechanism.

*Mechanical Drawing*—Thirty-six weeks, ten hours per week. The work consists of: Kinematic Drawing, including spur, bevel, worm and spiral gearing; Design of Shop Machines, such as lathes, planers, shapers, drills, etc., including an original design by each student of some shop machine complete, with all detail drawings.

*Chemical Laboratory*—Fifteen weeks, six hours per week.

*Analytical Mechanics*—Twenty weeks, five hours per week.

*Strength of Materials*—Fifteen weeks, five hours per week.

*Heat*—Ten weeks, five hours per week.

*Experimental Engineering Laboratory*—Fifteen weeks, six hours per week.

*Magnetism and Electricity*—Fifteen weeks, five hours per week.

*Graphic Statics*—Ten weeks, five hours per week.

*Calculus*—Twenty-two weeks, five hours per week.

*Electrodynamic Machinery*—Ten weeks, five hours per week.

*Theory of Machine Design*—Ten weeks, five hours per week.

*Dynamo and Motor Design*—Ten weeks, five hours per week.

*Electrical Appliances*—Ten weeks, five hours per week.

### SENIOR YEAR.

*Thermodynamics*—Fifteen weeks, three hours per week. This work consists of a study of the laws of thermodynamics, thermal capacities, and the application of thermodynamics to the steam engine.

*Steam Boilers*—Ten weeks, five hours per week. A study of the various commercial steam boilers, consumption of fuel, incrustations, determining the horse-power of boilers, boiler tests, the design of boilers for efficiency and economy, and the methods of transmission.

*Valve Gearing*—Fifteen weeks, five hours per week. The study of various forms of standard engine valves and methods of designing.

*Hydraulics*—Fifteen weeks, two hours per week.

*Alternating Currents*—Seventeen weeks, five hours per week.

*Mechanical Drawing*—Seventeen weeks, ten hours per week. This consists in working out valve-gear problems.

*Engine and Machine Designing*—Fifteen weeks, five hours per week. A study of the modern methods of designing engines, boilers and machines.

*Experimental Engineering*—Fifteen weeks, ten hours per week. In-

cludes a study of the steam-engine indicator, making engine, boiler, and materials for construction tests.

*Political Economy*—Ten weeks, five hours per week.

*Theory and Practice of Photography*—Ten weeks, five hours per week.

*Continuous Current Dynamos and Motors*—Nineteen weeks, five hours per week.

*History*—Twenty weeks, five hours per week.

*Dynamometers and Measurement of Power* –Twelve weeks, five hours per week.

*Thesis Work*—Nineteen weeks, twelve hours per week.

Every student, before he attains the degree of B. M. E., must present a satisfactory thesis on some new design of a machine, or an original investigation.

The greater part of the second and third terms of the Senior year is given to the preparation of this thesis. The subjects for theses are assigned to students by the Dean of the Mechanical and Electrical Engineering Faculty, and the completed theses are kept on file with the college records, that they may serve as a reference for future investigators.

### ELECTRICAL ENGINEERING.

The special work in electrical engineering is closely associated with steam engineering and machine design, but opportunity is offered for carrying on research work. The thesis of any candidate for B. M. E. may be along electrical lines.

The instruction is carried on with special reference to the needs of the practical electrical engineer. This work comprises the study of Central Station design and construction, of prime movers, the design and construction of electrodynamic machinery, the study of the problems involved in the distribution of electric light and the electric transmission of power, besides practice in electrical measurements, computation, and testing as applied to the construction and maintenance of electrical lighting and power plants, and to the purposes of investigation.

### JUNIOR AND SENIOR INSPECTION TRIP.

Annual trips, for the purpose of inspecting manufacturing and power plants, are taken by the Junior and Senior Classes. The Juniors, for several years, have visited Cincinnati, Hamilton and Dayton. During the last three years the Seniors have visited Chicago and its vicinity on the annual trip.

During the Spring Term, four days are set apart for the Junior trip and six for the Senior. The experiences of these trips are considered to be among the most valuable of the engineer's collegiate life.

### SUMMER SCHOOL OF MECHANIC ARTS.

The regular curriculum in Mechanical and Electrical Engineering has no elective course. In order to provide opportunity for instruction in them, a Summer School has been established, which continues in session ten weeks. In this school instruction is given in all the subjects taught in the

regular course of Mechanical and Electrical Engineering, as well as in elective courses of the Mechanic Arts.

The Summer School is designed especially for technical students, locomotive engineers and firemen, stationary engineers, artisans and mechanics. Special attention is paid to courses in Mechanical Drawing, Machine Design and Shop-work.

## XIII. DEPARTMENT OF ANATOMY AND PHYSIOLOGY.

DR. PRYOR.

The Department of Anatomy and Physiology occupies one half of the second floor of the Natural Science Building. The space assigned to this Department includes a large lecture and general recitation-room, an office, and a laboratory.

The lecture-room is provided with a Colt's Criterion Stereopticon with a microscopic attachment. Arrangements are made to darken the room for the use of the lantern. This method of giving illustrated lectures is extensively used. A large number of lantern slides have been purchased or made. These include all kinds of anatomical, physiological, histological and pathological subjects, and they have been selected in order to show not only human anatomy but sufficient comparative anatomy to illustrate the development and evolution of the organ or system.

This method of instruction is quite popular with students. It affords a detail not to be obtained from models or charts or from subjects for dissection.

The lecture and general recitation-room is perhaps the best equipped room for its purpose to be found in any institution of the South. It is well lighted and ventilated, is provided with the best opera chairs with arm rests, affording every convenience and facility for both student and lecturer.

The office contains the nucleus of a library. It is the purpose of the head of this Department to provide students with the latest and best books on Anatomy, Physiology, Hygiene, Histology, and Bacteriology.

The laboratory is provided with a Bausch and Lomb incubator, microscopes, microtomes, paraffin bath, etc. Tables are provided for individual students. Each table is equipped with the apparatus necessary for experimental work in Physiology. Students also have access to and use the kymograph, artificial circulation scheme (Porter's) capillary electrometer, artificial eye (Kühne's), heart-holder, orgograph, rheochord, plethysmograph, tambour, signal magnet, etc.

The Department is supplied with all kinds of models, such as an Auzoux papier-mache manikin, Auzoux's models for the eye in full and in section, models of the ear, larnyx, side of the face, hand, etc.; skeletons in full and in section; complete disarticulated skeletons for the individual use of students; a spaced skull; a Thoma-Zeiss Hæmacytometer; a Dudgeon's and a Mayrey's Sphygmograph; charts of all kinds, microscopes, etc. Microscopic slides are exhibited, showing the process of karyokinesis.

The method of instruction is by lectures, demonstrations, and recitations. Drawings are made on the blackboard in chalk by the instructor, and the student is required to copy them. They include drawings of the heart and of the great blood-vessels in colors; sections of the eye showing the connection of the cornea and sclerotic coat at the origin of the ciliary muscle, one turn of the cochlea giving the organ of Corti in full; the membranous labyrinth; a cross section of the spinal chord; a scheme illustrating the system of neurones, central and peripheral, both motor and sensory.

The student is required to take notes from lectures, to copy and preserve them for study and reference. The note-books are inspected at intervals, correct spelling and neatness in preparing them being insisted on.

All students who take the course leading to the degree of B. S. are required to attend lectures two terms of twenty weeks, five hours per week, during the Freshman year, and one term of fifteen weeks during the Sophomore year. The same amount of work is required of candidates for the degrees of B. Ped. and B. Agr. Candidates for the degree of A. B. are required to attend during the first term of the Sophomore year. Two classes for ten weeks are organized at the beginning of the second term for the benefit of Normal students who take the studies leading to the County Certificate.

### COURSE PREPARATORY TO THE STUDY OF MEDICINE.

This course, leading to the degree of B. S., with Anatomy and Physiology as the major study, is arranged to suit students who intend to enter upon a profession, and especially those who are to devote themselves to the study of medicine.

The studies of the Freshman and Sophomore years are identical with those of the other scientific courses, except that there is an additional course in Botany during the third term of the Sophomore year, and an additional course in Physics in the afternoon of that term. Students who take this course have the advantage of work in the X-rays.

The principal differentiation from the other scientific courses is found in the Junior and Senior years. The first term of the Junior is devoted to the following studies: Systematic Zoölogy, Osteology, French, and laboratory work in Chemistry; the second term to Palæontology, Experimental Psychology, French and laboratory work in Zoölogy; and the third term to Mineralogy, Embryology, French and Physiological Chemistry. The first term of the Senior year is devoted to French, History, Logic, Physiology, and laboratory work in Physiology; the second term, to Entomology, History, Metaphysics, Physiology, and thesis work; and the third term, to Entomology, Political Economy, Moral Philosophy, Physiology, and thesis work.

*The Laboratory Course in Physiology*—Is required of Seniors during the first term in the afternoon from 2:30 to 4:30. The work begins with the central nervous system. The first exercise begins with the study of the normal frog; its posture when at rest, its movements when in water and on

solids; compensatory movements, etc. A careful dissection of the frog's brain and drawings of it are made. Then follow experiments upon decerebrized frogs. Perfect cleanliness and aseptic surgical methods are observed as nearly as possible. Reflex action and inhibition of reflexes are studied with the pithed frog. The crayfish and earthworm are also used in the study of the central nervous system.

*Muscle*—The student must familiarize himself with the electrical apparatus necessary for the work that follows; nerve muscle preparations are made, the different kinds of stimuli are studied, graphic records are made with the kymograph, showing certain phenomena of muscular contraction, among them a single muscular contraction or twitch; the effect of load; repeated stimulation; summation of stimuli; superposition in tetanus, etc.

*Haemodynamics*—The scheme of artificial circulation used demonstrates arterial and venous pressure, and this is measured with mercury manometer. The scheme also shows the conversion of an intermittent stream into a continuous flow. Incompetence and stenosis of the mitral and aortic valves are demonstrated and with the thistle tube and kymograph pulse-tracings are made that compare favorably with those made with the sphygmograph by members of the class. Abnormal cases are often included.

*Normal Haematology*—Clinical examinations of the blood are made, including the enumeration of the blood corpuscles with the Thoma-Zeiss haemacytometer; the estimation of haemoglobin with Fleischl's haemometer; the staining and fixing of blood corpuscles; the reaction and specific gravity of blood, etc.

*The Special Senses*—The anatomy, gross and minute, of the eye and ear, and the physiology of these organs, are treated as fully as the time permits. During the year students dissect such mammals (dog, cat, and rabbit) as may be used to illustrate the lectures preceding and accompanying the practical work. Especial attention is given to the gross anatomy of the viscera, thoracic, abdominal and pelvic.

Every effort is made to stimulate and maintain interest throughout the course.

The students who complete the four years' course will be credited with one year's work at many of the Medical Colleges belonging to the American Association of Medical Colleges. Credit is also given for other work done. To a prospective student of medicine the advantages of this course can hardly be estimated. The additional training in Botany, Physics, Zoölogy, Osteology, Psychology, Embryology, Chemistry, Physiological Chemistry, and in experimental and laboratory work in Physiology, places him far in advance of those who have not pursued these studies.

As a prerequisite to entrance upon this course, students must have completed the Classical Course of the Academy, or its equivalent.

To those who are to become students of medicine, this Department offers inducements rarely enjoyed in educational institutions.

*Text-books:* Martin's Human Body, Stewart's Manual, Syllabus of the Professor's lectures.

*Books of Reference:* Gray's Anatomy, Gerrish's Anatomy, Shaefer's Physiology, Hall's Physiology, American Text-Book, Loeb's Physiology of the Brain.

## XIV, XV. DEPARTMENTS OF GEOLOGY AND ZOÖLOGY.

PROFESSOR MILLER.

### Geology.

#### EQUIPMENT AND FACILITIES.

This Department occupies one-half of the second floor of the Natural History Building.

The Geological Laboratory is fitted up with tables and chairs and contains the study-collection of fossils and minerals.

The Mineralogical Laboratory is arranged in its furnishings with special reference to its use as a mineral-testing laboratory.

The Geological Lecture Room, furnished with folding lecture-room seats, tables, lantern stands, sliding blackboard, wall screen, and means for quickly darkening the room, is admirably adapted for recitation and lecture uses.

The collections in Mineralogy and Palæontology are arranged and classified with special reference to their use in class instruction.

The Museum, occupying the entire third floor of the building, now contains the State Geological Survey Collection, a valuable addition to the instruction facilities of this Department.

As additional equipment may be mentioned the Department library of geological literature, consisting of Reports, both State and National, maps, charts, models, lantern slides, and photographic illustrations.

In addition to the facilities afforded by the in-door equipment, the situation of the College itself happens to be peculiarly favorable from a geological standpoint. Located as it is in the center of the Blue-grass Region, at the Base of the Geological Series of the State, it affords logically the best starting-point for the student of Kentucky geology who would gain a clear comprehension of how the rock foundations of his State have been laid. Both for this reason, therefore, and because geology is pre-eminently an out-door study, the "Excursion" is made a prominent feature of the instruction in this Department. It is by the field work these excursions afford that the student's ability to apply in-door knowledge previously acquired is put to the test, and his powers of making generalizations in the open air are exercised.

#### BRANCHES OF STUDY.

The general order of succession in the geological studies is as follows: (1) Palæontology; (2) Mineralogy; (3) Advanced Geology. Besides these, in which what follows is intimately based upon what precedes, are two self-contained studies; (4) A Shorter Course in Geology and (5) Economic Geology.

#### I. PALAEONTOLOGY.

SECOND TERM--Required of Juniors who elect as their major study Geology, Botany, Zoölogy, Anatomy, and Physiology, or Pedagogy.

Lectures on the nature and zoölogical positions of different fossil groups are given, and the student is expected to become familiar with the fossils themselves by actual examination. Special attention is paid to fossils common in Kentucky. The collections of the department are well suited for this purpose. The instruction is entirely by lectures and laboratory work.

### II. MINERALOGY.

THIRD TERM—This study follows Palæontology, and is required of the same students, with the addition of those who elect Agriculture as their major.

The object of the study is to render the students familiar with the composition and physical characters of those common minerals and rocks likely to be met with both in the course of every-day observation and in geological pursuits. The instruction involves both laboratory and text-book work. Crosby's Tables for Determination and his Common Minerals and Rocks are the books used.

### III. ADVANCED GEOLOGY.

FIRST TERM—Required of students who elect as their major study Geology, Botany, Zoölogy, or Pedagogy.

Candidates for A. B. may take this or course III.

It is meant to be the culmination for those who have availed themselves of all the opportunities for the study of Geology offered in this Department. It is to be hoped that some of these students may be induced to go further, and either in their home localities or elsewhere make a beginning at doing original work. Kentucky, with its large amount of territory practically unexplored geologically, offers an especially fine field to young geologists.

*Text-book:* Scott's Introduction to the Study of Geology.

### IV. SHORTER COURSE IN GEOLOGY.

FIRST TERM—For Seniors who are candidates for the degree of A. B. The only prerequisite for this course is the second term of Zoölogy.

*Text-book:* Brigham's Text-book of Geology.

### V. ECONOMIC GEOLOGY.

SECOND TERM—Required of students who elect as their major study Geology, Agriculture, Chemistry, Physics, Civil Engineering, or Mining Engineering.

As the name indicates, it is the practical or inorganic rather than the organic side of Geology that is here made prominent. Historical Geology is studied briefly and in outline. Fossils are considered important in so far as they serve to determine rocks, whereas in General and Biological Geology the reverse may be considered true. Structural Geology becomes relatively important, and Mineralogy and Lithology occupy a leading place. Some of the topics of economic importance treated are: Common Rocks and Vein-forming minerals; Origin of Ore Deposits; Mining Terms and Methods; Coal; Petroleum: Natural Gas and Asphaltums; Building, Stone, Clay, and

Cement; Geological Fertilizers; Relation of Geology to Agriculture; Relation of Geology to Engineering.

*Text-book:* Tarr's Economic Geology, supplemented by leetures.

In addition to the above, a course of about seven lectures on the Relation of Geology to Agriculture is given in connection with the Short Course in Agriculture.

## Zoölogy.

### EQUIPMENT AND FACILITIES.

The Department of Zoölogy occupies two rooms on the first floor of the Natural History Building. These rooms are provided with tables and a special set of apparatus, including compound microscopes, for each student. Besides this there is a complete general equipment for all lines of zoölogical work, such as a full set of zoölogical charts, imported from Germany for use in the study of systematic Zoölogy; microtomes and paraffine baths for work in microscopy; a selection of type skeletons to illustrate osteology; alcoholic specimens of both marine and inland forms to illustrate general Zoology, with duplicates for class dissections; and finally the Department is equipped with a library of standard zoölogical literature, including the leading periodicals devoted to the interests of biological science. Moreover, opportunities for collecting, zoölogical material, as well as for studying the habits of living animals, are afforded by the "Excursions" mentioned above.

### BRANCHES OF STUDY.

These are six, enumerated as follows: (1) Systematic Zoölogy; (2) Laboratory Zoölogy; (3) Osteology; (4) Embryology; (5) Physiological Psychology; (6); Economic Entomology.

### I. SYSTEMATIC ZOÖLOGY.

First Term—Required of students who elect as their major study Geology, Zoology, Botany, Agriculture, Chemistry, Pedagogy, Anatomy and Physiology, or Physics.

A general presentation of the subject is here attempted. The practical work is limited to that which can be satisfactorily accomplished in exercises of one hour each. Alternating with lectures on the different sub-kingdoms, classes and orders of animals, accompanied with some species determination by the student, a text-book, Arthur Thompson's Animal Life, is used to present to the class in a form suitable for discussion such interesting topics of Biology as Interrelation of Plants and Animals, the Struggle for Existence, Coloration of Animals, Social Life of Animals, Protoplasm, Origin of Life, Physiological Division of Labor, Animal Psychology, Princfples of Embryology, The Past Hlstory of Animals, The Doctrine of Evolution, Heredity, Animal Life, and ours.

### II. LABORATORY ZOÖLOGY.

Second Term—Required of those who elect as their major study Zoology, Geology, Botany, Pedagogy, Anatomy and Physiology, or Agriculture.

The work of this term consists largely of animal dissection, and it also

involves an extensive use of the compound microscope. Students are taught not only how to examine under the microscope living organisms of small size, but also to prepare these and the tissues of higher animals as permanent mounts for microscopical study.

*Laboratory Text-book:* Needham's Zoology, furnished to each student as a part of the equipment, for the use of which a small fee is charged.

THIRD TERM—This term is devoted to laboratory work exclusively, and this consists of a thorough study of the anatomy and development of some vertebrate, as the frog.

### III. OSTEOLOGY.

FIRST TERM—Required of students who elect as their major study Zoology, Anatomy and Physiology, or Geology.

Five hours a week are given to the comparative study of the vertebrate skeleton—chiefly that of the Mammalia.

*Text-book:* Flower's Osteology of the Mammalia.

### IV. EMBRYOLOGY.

THIRD TERM—Required of Juniors who elect as their major study Zoology, Anatomy and Physiology or Agriculture.

Five hours a week are assigned for this study. Instruction consists of lectures upon the general facts and principles of Embryology, accompanied by practical work on the embryonic development of such vertebrates as the frog and chick.

*Text-book:* Balfour's Elements of Embryology.

## XVI. DEPARTMENT OF PHYSICS.

PROFESSOR PENCE.

### EQUIPMENT AND FACILITIES.

The Department of Physics occupies two adjacent rooms on the east side, and in the basement, of the Main College Building. The lecture-room is eighteen feet by forty-four feet, and will comfortably seat fifty or more students. It has the necessary lecture-table, with gas, water, and drainage; and is arranged to be used at pleasure as a dark-room. The laboratory is twenty-four feet by thirty feet. It is furnished with instruments for use in experimentation, cases for apparatus, tables, water; and has twenty-four spaces at the tables for individual work, each with gas and drawers. This department is equipped with apparatus, nearly all of which is new.

### COURSE IN PHYSICS.

The course in Physics is offered to those who may find in its schedule of studies on page 65 lines of work which pursued may enable them to enter successfully on some life profession. It is intended for those whose natural tastes and abilities lead them to pursue such studies, as well as for those who wish to teach Physics or to do work in Physical Science. In the present highly scientific age the greatest developments have been in Physical

Science, and those who are best able to utilize physical resources are those who are best able to recognize physical laws and accurately interpret physical phenomena.

The course is not technical. It is as broadly scientific as the conditions under which it exists will allow. As seen from the schedule of studies, three years are devoted to Theoretical and Experimental Physics, three and one half to Mathematics and Astronomy, two to English, two to German, and one each is given to Chemistry, Physiology, Botany and French. One year is also given to History and Political Economy, and one to Logic, Mental and Moral Philosophy. Five months are assigned to Zoölogy and five to Geology.

The work proper in Physics begins in the Sophomore year, during the first term of which there are lectures, fully illustrated by experiments, with recitations, one hour daily. This work embraces the subjects of Molar, Molecular, and Ether Dynamics, treating of the General Properties of Matter, Sound, Heat, Light, Electricity, and Magnetism; it is intended to give the student a general knowledge of physical phenomena and of physical laws, and to prepare him for the practical work that follows.

Laboratory practice, one and one-half hours daily, follows, and continues during tha remainder of this year. Experimental work is done in the Mechanics of Solids, Liquids, and Gases, and in heat, during the second term; and in Electricity and Magnetism, Sound, and Light, the third term.

*Text-books:* Gage's Elements of Physics and Gage's Physicaf Experiments.

The work of the Junior year is specialized. There are illustrated lectures and recitations one hour daily throughout the year. Electricity and Magnetism is studied during the first term; Heat, the second term; and Light, the third. Some of the subjects considered in the first term are Frictional Electricity, Magnetism, Current Electricity, Electro-statics, Electro-magnetics, Measurements of Currents, Thermo-electricity, Heat and Power and Light from Electric Currents, Inductance, Dynamos, Motors, Transformers, Electro-chemistry, Telegraphy, Telephony, Electric Waves, Wireless Telegraphy, X-rays. In Heat the principal subjects are Thermometry, Expansion of Solids and Liquids and Gases, Thermal Units, Calorimetry, Mechanical Equivalent of Heat, Fusion and Vaporization, Laws of Vapors, Hygrometry, Thermo-Chemistry, Dynamical Theory of Gases, Radiation, Convection, Conduction, Thermo-dynamics, Steam Engine. In Light the subjects are Visible Radiant Energy, Velocity of Light, Reflection and Refraction, Lenses, Optical Instruments, Aids to Vision, the Spectrum, etc.

Advanced experimental work in the laboratory extends through the second and third terms of the Junior year, one and one-half hours daily, and consists of Physical Measurements in Mechanics, Sound, Heat, Light, Electricity, and Magnetism.

*Text-books:* S. P. Thompson's Electricity and Magnetism, Cumming's Heat, Glazebrook's Light, Sabine's Laboratory Course in Physical Measurements.

Much importance is attached to all work in the laboratory. Each student is furnished with the necessary apparatus, and he must keep a systematic record of all his experiments, giving data and results of each.

The amount of Physics required in each of the groups of courses leading to a degree is to be seen in the respective schedules of studies.

## XVII. DEPARTMENT OF ENTOMOLOGY.

PROFESSOR GARMAN,

Of the Experiment Station.

In the Agricultural Course and in the Scientific Courses, in which Botany and Zoology are major studies, instruction in Entomology begins with the second term of the Senior year, students in these courses meeting the first hours of Tuesdays and Thursdays.

Occasional inquiries for Entomologists to fill positions in other institutions have lately been received at the College, and have suggested the desirability of a special course of study in Entomology that will fit those who pursue it for the work required in Agricultural Colleges and other institutions. The Scientific Course with Entomology as major study is intended to meet this want. It is estimated by our best entomologists and statisticians that we lose annually in this country from the depredations of injurious insects not less than $100,000,000. If this be so, it is highly important that a knowledge of insects and their habits should be disseminated among the people, and it is especially important in Kentucky, where the leading industry is agriculture. It has been urged that a reduction of a crop to the extent of one fourth or one half of its value by insects should be regarded as a tax of twenty-five or fifty per cent. on its value. Such a tax is collected year after year, often without any attempt at resistance. It is the purpose of the Entomological work at the College to place in the hands of the students who expect to make farming their occupation such means of defense against loss as are known to those who have given the matter study. The Department is especially well provided for in this direction, having the benefit of the work done at the Experimental Station and having access to the collections, apparatus, and library accumulated for Station work. The collection now contains examples of most of the injurious insects which are found in the United States, and is constantly being enlarged. The Station is well supplied with breeding-cages for use in studying the habits and life-histories of insects, so that students who wish to do so have an opportunity to observe for themselves the various stages presented by a developing insect, and may see it in many cases actually engaged in its destructive work. An insectarium recently added to our facilities, gives us increased opportunity in this field of investigation.

## XVIII. DEPARTMENT OF MINING ENGINEERING.

PROFESSOR NORWOOD,

State Inspector of Mines.

The establishment of this School was authorized by an Act of the General Assembly, Session of 1898. The course is laid out with the design of affording the student a thoroughly good foundation for professional work in Mining, Metallurgy, Assaying and Geology, and of so preparing him that he may readily and quickly assimilate that knowledge of the details of practice which may be gained only through experience. The effort is made to acquaint tne student not only with the methods of mining and mine management in particular, but to give him such instruction in mechanical and civil engineering as may satisfy the needs of the modern mining engineer. The schedule of studies for the first two years, while distinctive in some minor respects, upon the whole is closely similar to those followed dnring the same years in the Schools of Mechanical Engineering and of Civil Engineering. Actual differentiation occurs at the entrance of the Junior year.

The course in mining is made as "practical" as the limitations of college instruction permit. With this in view, the equipment project for the Mining Laboratory includes the installation of such an ore dressing and coal washing plant as will permit work to be conducted along practical lines. It is intended that the Laboratory shall not only serve the purposes of instruction, but that it shall prove helpful, as a testing laboratory, to those engaged in mining operations in the coal, lead, zinc and spar districts of the State. As part of the equipment, therefore, a standard, full-sized Wilfley concentrating table has been purchased, instead of the smaller, experimental table generally used for purposes of instruction. A handsome working model of a ventilating-fan, with fan-house (the fan being three feet in diameter), designed and built by Mr. Albert Toombs, has been presented to the Department by Mr. John B. Atkinson, President of the St. Bernard Mining Co., Earlington, Ky.

In Chemistry three terms are required. In the Sophomore year the course consists of lectures and recitations on the non-metals and their compounds, and the simpler laws of chemical change. In the Junior year, the first term is devoted to the study of the metals and their more important compounds, and to qualitative analysis. Laboratory work in quantitative analysis is taken up in the third term.

In Metallurgy two terms of work is required. The first terms's work is the same as that required in the Course of Mechanical Engineering and of Civil Engineering. Huntington and Macmillan's text-book is used as a guide, and nine or ten metals, including iron, copper, zinc, tin, lead, nickel, cobalt, silver, and gold are studied. The work of the second term, which occurs in the Junior year, consists of practical work in the Metallurgical Laboratory, and will include assaying, together with the more comprehen-

sive study of certain processes for the extraction of silver and gold, such as the amalgamation, chlorination and cyanide processes.

The instruction in the special theme of Mining (including both coal and metal), which begins with the Junior year, is laid out along a continuous line, each subject being introductory to that which follows, and is given by lectures, supplemented by text-books and special reading. The Department is equipped with an excellent electric-light stereopticon, with a large number of special slides for illustrating lectures; and in addition thereto many charts and "blue prints," illustrating mining methods and mining machinery, have been removed. A general statement of the subjects discussed under the head of Mining is given under the appropriate years.

The State College is exceptionally well situated with reference to the practical study of both coal and metal mining (including lead, zinc and iron), and for the study of metallurgical practice in certain lines, there being within the State numerous coal and metal mines, and several iron and steel metallurgical establishments, within easy reach of Lexington; while the copper mines of Tennessee, the iron mines of Virginia, Alabama and Tennessee, and the gold mining regions of Alabama and Georgia, with their accompanying metallurgical plants, may be reached within twenty-four hours or less of travel.

### COURSE OF STUDY.

The schedule on a succeeding page exhibits the studies that lead to the degree of B. E. M.

The courses are as follows:

#### FRESHMAN YEAR.

FIRST TERM—English, Plane Trigonometry, Woodwork (Tools and Machinery,) Drawing (Lettering, etc.), Shop Work (Bench and Lathe).

SECOND TERM—English, Solid Geometry, Physics, Free-hand Drawing, Mechanical Drawing.

THIRD TERM—English, Higher Algebra, Physics, Mechanical Drawing.

#### SOPHOMORE YEAR.

FIRST TERM—Analytical Geometry, Chemistry, Physical Laboratory, Geology, Iron and Steel Forging, Mechanical Drawing.

SECOND TERM—Analytical Geometry, Surveying, Metallurgy, Descriptive Geometry, Physical Laboratory, Geometric and Descriptive Geometry Problems.

THIRD TERM—Analytical Geometry, Calculus, Descriptive Geometry, Elementary Design, Surveying and Mapping.

#### JUNIOR VEAR.

*Electricity and Magnetism*, first term; Professor Pence.
*Calculus concluded*, first and second terms; Professor White.
*Strength of Materials*, first term; Professor Faig.
*Chemistry of Metals*, first term; Professor Kastle.
*Surveying and Mapping*, first term; Professor Brooks.

*Mettallurgy and Assaying*, second term; Professor Kastle.
*Analytical Mechanics*, second and third terms; Professor Faig.
*Electro-dynamic Machinery*, first and second terms; Assistant Professor Sawyer.
*Mineralogy, Blow-piping*, third term; Professor Miller.
*Quantitative Analysis*, third term; Professor Kastle.
*Mechanical Appliances*, third term; Assistant Professor Sawyer.

MINING 1. INTRODUCTORY, EXCAVATING, QUARRYING.—(*a*) Objects and definitions; commercial importance; connection with auxiliary sciences; history; coal and metal mines compared; mineral rights, etc. (*b*) Excavation in soft ground and in rock; tools and methods; steam excavators and dredges; by water, etc. (*c*) Explosives and blasting; kinds and effects of explosives; theory and practice of blasting; placing, charging, and firing holes under various conditions; precautions in blasting; substitutes for explosives. (*d*) Quarrying; plants and methods for various sorts of rock; underground quarries. *Eight weeks.*

MINING 2. BORING, SHAFT-SINKING, SHAFT-BORING.—(*a*) Boring; methods with auger, with rods, and with rope; rotary boring; boring tools; casing; recovering lost tools; drive piping. (*b*) Shaft-sinking; general principles. Methods in soft ground and in rock. Hoisting, ventilating, and draining during sinking. Timbering, walling, tubbing, and linings for special cases. Sinking linings in watery ground and in quicksand. (*c*) Shaft-boring; general observations. Various methods described and compared. *Four weeks.*

MINING 3. PROSPECTING, DEVELOPMENT, METHODS OF WORKING.—(*a*) Mineral deposits; geological considerations. Relations of ore deposits to countrv rock; influence upon topography; connection between topographic forms due to geological structure and the existence of veins. General broad classification of mineral deposits, lodes, veins, beds and placers; regular and irregular. Elements defining the nature and mode of occurrence of a deposit. Effect of variability and disturbances of stratified and crystalline rocks. Irregularities and disturbances of beds and veins. Solution of problems. (This is merely supplementary to the more elaborate treatment of the subject in the Department of Geology and is designed to emphasize matters of practical moment to the miner.) (*b*) Prospecting: Systematic methods. Value of geology. Tracing outcrops; hillside and stream float; old and existing works; traditions; trenching and flooding; boreholes, adit levels, pits, cross-cuts. Tracing lodes; effects of cross-courses as to heaves and contents: panning. Dipping needle. Divining rod. (*c*) Exploration and Development: Preliminary questions as to commercial feasibility of working particular deposits. Choice of exploratory methods —shaft, adit, slope. Location of openings with reference to development. Laying out of the workings, and order of exploitation. Driving tunnels, drifts, gangways, slopes, levels, cross-cuts. Advancing by single breast and by benches. Maintaining alignments—"sights." Timbering narrow and

broad work. Accidents. Upraises—vertical and inclined. Winzes—methods of sinking and raising. (*d*) Methods of Working and Supporting Excavation: General rules as to choice of mode of working away, etc. Breaking ground (1) in coal mining, and (2) in metal mining. Support of excavations (1) by pillars of mineral, (2) by timbering, (3) by caving and filling. Methods of working applicable to deposits according to their origin, thickness, inclination and character. Coal, Vein, and Mass mining. Open cuts and stream working. Hydraulic mining, Dredging. *Seventeen weeks.*

MINING 6. MINE SURVEYING.—General principles of underground surveying. Carrying meridian into mine, etc.; locating lines of work; construction of mine maps and sections; plumbing shafts, surveying bore-holes, etc. *Three weeks.*

### SENIOR YEAR.

*History and Political Economy*, President Patterson.

*Hydraulics*, first term; Professor Brooks.

*Steam Engine, Compressed Air*, first term; Professor Anderson.

*Economic Geology*, second and third terms; Professor Miller.

*Electricity Applied to Mining Operations*, second term; Assistant Professor Sawyer.

*Mine Plant Design.* (Drawing.)

*Thesis work.*

MINING 4. ORE AND COAL DRESSING, MILLING, COAL-WASHING. General principles and theories. Picking, crushing; theory of mineral separations; sizing, classification, jigging, concentration and concentrators. Coal-washing. Gold and silver milling; Stamp and other mills. Amalgamation: Theory and practice; care of mill plates; losses of mercury, etc. Pan amalgamation. "Patent" substitutes for plate amalgamation. Pan assays for free-milling ores, etc. *Five weeks; afternoons.*

MINING 5. ORE DRESSING LABORATORY.

MINING 6. MINE SURVEYING.—Practice and map construction.—*Afternoons, ten weeks; Saturdays, fourteen weeks.*

MINING 7. MINE ENGINEERING.—Extraction and removal of material: Methods and machinery; mine and surface haulage roads; rope and other means of haulage. Drainage: Controlling and removing water; dams; drainage levels, air lift. Ventilation: Theoretical considerations; mine gases; methods of ventilation; distribution of air supply. Illumination. Descent and ascent. Accidents: Causes; places; explosions; safeguards; rescue and relief. *Seventeen weeks.*

MINING 8. MINE PLANT.—Machinery and appliances for mining, hoisting, draining, ventilating, hauling, loading, storing, etc. *Ten weeks,*

MINING 9. EXAMINATION AND VALUATION OF MINES, ETC.—Methods and precautions in examination and valuation. "Salting," concealing

exhausted workings, etc. Relation of capital invested to actual dividends. Mine management. Cost sheets. *Three weeks.*

MINING 10. MINE VISITATION.—Opportunity for visiting mines under the Guidance of the Dean, or of the Assistant Inspector of Mines, will be given at the close of the term.

The larger part of the third term is devoted to thesis work, subjects for which are assigned by the Dean.

## DEGREES.

The State College confers the degrees of—

Bachelor of Science (B. S.),
Bachelor of Arts (A. B.),
Bachelor of Agriculture (B. Agr.),
Bachelor of Civil Engineering (B. C. E.),
Bachelor of Mechanical Engineering (B. M. E.),
Bachelor of Mining Engineering (B. E. M.),
Bachelor of Pedagogy (B. Ped.),
Master of Science (M. S.),
Master of Arts (A. M.),
Master of Agriculture (M. Agr.),
Master of Civil Engineering (C. E.),
Master of Mechanical Engineering (M. E.),
Master of Mining Engineering (E. M.),

### CONDITIONS OF GRADUATION.

To attain the Bachelor's degree the applicant must have been a student of the College at least one session, and he must have passed the examination on all the courses of study leading to the desired degree.

To attain the Master's degree the applicant must have attained the Bachelor's; he must have pursued, for at least one session in this College or two sessions elsewhere, a major study selected by himself and one or two minor studies assigned him by the Faculty; and finally, he must, at least thirty days before the end of the session, have satisfied the Faculty that he is duly proficient in his studies, and have presented to the College an acceptable thesis on his major study or on some part thereof.

If the applicant be an alumnus of another institution of learning, he must satisfy the Faculty that he has completed a course of study for his first degree equivalent to that prescribed in this College for the same degree; and he must matriculate and study under the direction of the Faculty at least one session.

Students who complete a part of the courses in a satisfactory manner may, in attestation of the fact, receive Certificates of Proficiency.

## COURSES GROUPED FOR DEGREES.

### I. COURSES FOR THE DEGREE OF B. S.

History, Political Economy, and Metaphysics,.....President Patterson.
Botany, .....Professor Mathews.
The English Language and Literature,.....Professor Mackenzie.
Military Science, .....Captain Byroade.
Chemistry, .....Professor Kastle.
Mathematics and Astronomy,.....Professor White, Dean.
The French and German Languages,.....Professor Wernicke.
Anatomy and Physiology,.....Professor Pryor.
Geology and Zoology,.....Professor Miller.
Physics,.....Professor Pence.
Drawing, .....Professor Muncy.

For the degree of M. S., Chemistry, Biology, Geology, Mathematics, or Physics may be selected as major study; and minor studies will be assigned from Biology, Chemistry, Geology, Mathematics, Physics, English, History, Political Economy, Metaphysics, French, and German.

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR, CHEMISTRY.)

| YEAR | TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR. | AFTERNOON. |
|---|---|---|---|---|---|---|---|
| FRESHMAN. | 1 | English. | Trigonometry. | German. | | Drill. | Drawing. |
| | 2 | English. | Solid Geometry. | German. | Physiology. | Drill. | Drawing. |
| | 3 | English. | Algebra. | German. | Physiology. | Drill. | Botany (Entr.) |
| SOPHOMORE. | 1 | Anal. Geom. | German. | Physics. | Physiology. | Drill. | Botany. |
| | 2 | Anal. Geom. | German. | Botany. | Chemistry. | Drill. | Physics. |
| | 3 | Anal. Geom. | German. | Calculus. | Chemistry. | Drill. | *Physics.* |
| JUNIOR. | 1 | *Theor. Chemistry.* | *English.* | Calculus. | French. | Drill. | Chemistry. |
| | 2 | *Theor. Chemistry.* | *English.* | Calculus. | French. | Drill. | *Chemistry.* |
| | 3 | *Theor. Chemistry.* | *English.* | *Theor. Chem.* | French. | Drill. | *Quant. Analysis.* |
| SENIOR. | 1 | Zoölogy. | History. | Logic. | *Chem Reading.* | Drill. | *Organ. Chemistry.* |
| | 2 | *Qnant. Analysis.* | History. | Metaphysics. | *Econ. Geology.* | Drill | *Chem. Research* |
| | 3 | *Quant. Analysis.* | Polit. Economy. | Mor. Philos. | | Drill. | *Chem. Research Thesis* |

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR, ZOOLOGY.)

| YEAR | TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR | AFTERNOON. |
|---|---|---|---|---|---|---|---|
| FRESHMAN. | 1 | English. | Trigonometry. | German. | | Drill. | Drawing. |
| | 2 | English. | Solid Geometry. | German. | Physiology. | Drill. | Drawing. |
| | 3 | English. | Algebra. | German. | Physiology. | Drill. | Entr. Botany. |
| SOPHOMORE. | 1 | Analyt. Geom. | German. | Physics. | Physiology. | Drill. | Botany. |
| | 2 | Analyt. Geom. | German. | Botany. | Chemistry. | Drill. | Physics (Lab.) |
| | 3 | Analyt. Geom. | German. | Syst. Botany | Chemistry. | Drill. | |
| JUNIOR. | 1 | Zoology. | Osteology. | | French. | Drill. | Chemistry (Lab ) |
| | 2 | Palæontology. | | | French. | Drill. | Zoology (Lab.) |
| | 3 | Mineralogy. | | | French | Drill. | Embryology. |
| SENIOR. | 1 | | History. | Logic. | Spher. Trigon. Astronomy. | Drill. | Geology. |
| | 2 | Entomology. | History. | Metaphysics. | | Drill. | Thesis. |
| | 3 | Entomology. | Polit. Economy. | Mor. Philosophy. | Astronomy. | Drill. | Thesis. |

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR, GEOLOGY.)

| YEAR | TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR. | AFTERNOON |
|---|---|---|---|---|---|---|---|
| FRESHMAN. | 1 | English. | Trigonometry. | German. | | Drill. | Drawing. |
| | 2 | English | Solid Geometry. | German. | Physiology. | Drill. | Drawing. |
| | 3 | English. | Algebra | German. | Physiology. | Drill. | Entr. Botany. |
| SOPHOMORE. | 1 | Analyt. Geom. | German. | Physics | Physiology. | Drill. | Botany. |
| | 2 | Analyt. Geom. | German. | Botany. | Chemistry. | Drill. | Lab Physics. |
| | 3 | Analyt. Geom. | German. | Syst. Botany. | Chemistry. | Drill. | |
| JUNIOR. | 1 | Zoology. | Osteology. | | French. | Drill. | Lab. Chem. |
| | 2 | Palæontology. | Surveying | Mech. Drawing. | French. | Drill. | |
| | 3 | Mineralogy. | | Mech. Drawing. | French. | Drill. | Surveying. |
| SENIOR. | 1 | | History. | Logic. | Spher. Trigon. Astronomy. | Drill. | Gen. Geol. |
| | 2 | | History. | Metaphysics | Geology. | Drill. | Thesis. |
| | 3 | | Polit. Econ. | Moral Philos. | Astronomy. | Drill. | Thesis. |

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR, BOTANY.)

| YEAR | TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR. | AFTERNOON. |
|---|---|---|---|---|---|---|---|
| FRESHMAN. | 1 | English. | Trigonometry. | German. | | Drill. | Drawing. |
| | 2 | English. | Solid Geometry. | German. | Physiology. | Drill | Drawing. |
| | 3 | English. | Algebra. | German. | Physiology. | Drill. | Entr. Botany. |
| SOPHOMORE. | 1 | Analyt. Geom. | German. | Physics. | English. | Drill. | Gen. Botany. |
| | 2 | Analyt. Geom. | German. | Gen. Botany. | Chemistry. | Drill. | Lab. Physics. |
| | 3 | Analyt. Geom. | German | Syst. Botany. | Chemistry. | Drill. | |
| JUNIOR. | 1 | Zoology. | Plant Histology. | Econ. Botany. | French. | Drill. | Lab. Chemistry. |
| | 2 | Palæontology. | | Econ. Botany. | French. | Drill. | Lab. Zoology. |
| | 3 | Mineralogy. | Botany Algæ. | Bot. Alg. Fungi. | French. | Drill. | Lab. Zoology. |
| SENIOR. | 1 | | History. | Logic. | Spher. Trigon Astronomy. | Drill. | Geology. |
| | 2 | Entomology. | History. | Metaphysics. | Thesis. | Drill. | Thesis. |
| | 3 | Entomology. | Polit. Economy. | Mor. Philosophy. | Astronomy. | Drill. | Thesis. |

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR, PHYSICS.)

| YEAR | TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR | AFTERNOON. |
|---|---|---|---|---|---|---|---|
| FRESHMAN. | 1 | English. | Trigonometry. | German. | | Drill. | Drawing. |
| | 2 | English. | Solid Geometry. | German. | Physiology. | Drill. | Drawing. |
| | 3 | English. | Algebra. | German. | Physiology. | Drill. | Botany. |
| SOPHOMORE. | 1 | Analyt. Geom. | German. | Physics. | Physiology. | Drill. | Botany. |
| | 2 | Analyt. Geom. | German. | Botany. | Chemistry. | Drill. | Physics. |
| | 3 | Analyt. Geom. | German. | Calculus | Chemistry. | Drill. | Physics. |
| JUNIOR. | 1 | Electricity. Magnetism. | English. | Calculus. | French | Drill. | Chemistry |
| | 2 | Heat. | English. | Calculus. | French. | Drill. | Physics |
| | 3 | Light. | English. | | French | Drill. | Physics. |
| SENIOR. | 1 | Zoölogy. | History. | Logic. | Spher. Trigon. Astronomy. | Drill. | Physics. |
| | 2 | | History. | Metaphysics. | Geology. | Drill. | Thesis. |
| | 3 | | Polit. Economy. | Mor. Philosophy. | Astronomy. | Drill. | Thesis. |

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR, ENTOMOLOGY.)

| YEAR | TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR. | AFTERNOON. |
|---|---|---|---|---|---|---|---|
| FRESHMAN. | 1 | English. | Trigonometry. | German. | | Drill. | Drawing. |
| | 2 | English. | Solid Geometry. | German. | Elem. Entomology. | Drill | Drawing. |
| | 3 | English. | Algebra. | German. | Elem. Entomology. | Drill. | Entr. Botany. |
| SOPHOMORE. | 1 | Analyt. Geom. | German. | Physics. | Physiology. | Drill. | Lab. Botany. |
| | 2 | Analyt. Geom. | German. | Gen. Botany. | Chemistry. | Drill. | Lab. Physics. |
| | 3 | Analyt. Geom. | German | Syst. Botany. | Chemistry. | Drill. | Syst. Botany. |
| JUNIOR. | 1 | Zoölogy. | Adv. Entomology. | Adv. Entomology. | French. | Drill. | Lab. Chemistry. |
| | 2 | Palæontology. | Adv. Entomology. | Adv. Entomology. | French. | Drill. | Lab. Chemistry |
| | 3 | Mineralogy. | Syst. Entomology. | Syst. Entomology. | French. | Drill. | Lab. Chemistry |
| SENIOR. | 1 | Econ. Entomology. | History. | Logic. | Spher. Trigon· Astronomy. | Drill. | Geology. |
| | 2 | Econ. Entomology. | History. | Metaphysics. | Thesis. | Drill. | Thesis. |
| | 3 | Econ. Entomology. | Polit. Economy. | Mor. Philosophy. | Astronomy. | Drill. | Thesis. Photog. |

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR, ANAT. AND PHYSIOL.)

| Year | Term | First Hour. | Second Hour. | Third Hour. | Fourth Hour. | Fifth Hour. | Afternoon |
|---|---|---|---|---|---|---|---|
| Freshman. | 1 | English. | Trigonometry. | German. | | Drill. | Drawing. |
| | 2 | English. | Solid Geometry. | German. | Physiology. | Drill. | Drawing. |
| | 3 | English. | Algebra. | German. | Physiology. | Drill. | Entr. Botany. |
| Sophomore. | 1 | Analyt. Geom. | German. | Physics. | Physiology. | Drill. | Gen. Botany. |
| | 2 | Analyt. Geom. | German. | Gen. Botany. | Chemistry. | Drill. | Lab. Physics. |
| | 3 | Analyt. Geom. | German. | Syst. Botany. | Chemistry. | Drill. | Lab. Physics. |
| Junior. | 1 | Zoölogy. | Osteology. Comp. | Osteology Human. | French. | Drill. | Lab. Chemistry |
| | 2 | Organic Chemistry | | Osteology Human. | French. | Drill. | Lab. Zoölogy. |
| | 3 | PhysicalChemistry | | Osteology Human. | French. | Drill. | Physiology. Chemistry. |
| Senior. | 1 | French. | History. | Logic. | Geology. | Drill. | Lab. Physiolog. |
| | 2 | Entomology. | History. | Metaphysics | Physiology. Thesis. | Drill. | Thesis. |
| | 3 | Entomology. | Polit. Econ. | Moral Philos. | Physiology. Thesis. | Drill. | Embryology. |

### II. COURSES FOR THE DEGREE OF A. B.

History, Political Economy, and Metaphyics, .....President Patterson.
Botany....., ..... ..... ..... . ..... Professor Mathews,
The English Language and Literature, .....Professor Mackenzie.
Military Science, ..... ... ..... .....Captain Byroade.
Chemistry, ..... ..... ..... .....Professor Kastle.
Mathematics and Astronomy, .....Professor White.
The French and German Languages, ..... ..... .... Professor Wernicke.
The Greek and Latin Languages, ..... ..... ...Professor Neville, Dean.
Ass't Professor Blanton.
Physiology, .....Professor Pryor.
Geology and Zoölogy, ..... ... ..... ..... .....Professor Miller.
Physics, ..... ..... .....Professor Pence.

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For the Degree of A. M., Greek, Latin, English, History, Mental Science, French, German, or Gothic may be selected as major study; and minors will be assigned from Greek, Latin, English, Mathematics, History. Metaphysics, Political Economy, French and German.

## SCHEDULE OF STUDIES FOR THE DEGREE OF A. B. (MAJOR GREEK AND LATIN.)

| Year | Term | First Hour. | Second Hour. | Third Hour. | Fourth Hour. | Fifth Hour. | Afternoon. |
|---|---|---|---|---|---|---|---|
| Freshman. | 1 | English. | Trigonometry. | Greek. German. | Latin | Drill. | |
| | 2 | English | Solid Geometry. | Greek. German. | Latin. | Drill. | |
| | 3 | English. | Algebra. | Greek. German. | Latin. | Drill. | |
| Sophomore. | 1 | Latin. | Greek. German. | Physiology. | English. | Drill. | |
| | 2 | Latin. | Greek. German. | Physics. | Chemistry. | Drill. | |
| | 3 | Latin. | Greek. German. | Physics. | Chemistry. | Drill. | |
| Junior. | 1 | Analyt. Geom. | English. | Greek. Latin. | French. | Drill. | |
| | 2 | Analyt. Geom. | English. | Greek. Latin. | French. | Drill. | |
| | 3 | Analyt. Geom. | English. | Greek. Latin. | French. | Drill. | Botany. |
| Senior. | 1 | Latin. French. | History. | Logic. | Spher. Trigon. Astronomy. | Drill. | Geology. |
| | 2 | Latin. French. | History. | Metaphysics. | Geology. | Drill. | Zoölogy. |
| | 3 | Latin. French. | Polit. Economy. | Mor. Philos. | Astronomy. | Drill. | |

## SCHEDULE OF STUDIES FOR THE DEGREE OF A. B. (MAJOR, ENGLISH.)

| Year | Term | First Hour. | Second Hour. | Third Hour. | Fourth Hour. | Fifth Hour. | Afternoon. |
|---|---|---|---|---|---|---|---|
| Freshman. | 1 | *English.* | Trigonometry. | Greek. German. | Latin. | Drill. | |
| | 2 | *English.* | Solid Geom. | Greek. German. | Latin. | Drill. | |
| | 3 | *English.* | Algebra. | Greek. German. | Latin. | Drill. | |
| Sophomore. | 1 | Latin. | Greek. German. | Physiology. | *English.* | Drill. | |
| | 2 | Latin. | Greek. German. | Physics. | Chemistry. | Drill. | |
| | 3 | Latin. | Greek. German. | Physics. | Chemistry. | Drill. | Botany. |
| Junior. | 1 | Analyt. Geom. | *English.* | Greek. Latin. | French. | Drill. | *Anglo-Saxon.* |
| | 2 | Analyt. Geom. | *English.* | Greek. Latin. | French. | Drill. | Zoölogy. |
| | 3 | Analyt. Geom. | *English.* | Greek. Latin. | French. | Drill. | *Anglo-Saxon.* |
| Senior. | 1 | Hebrew. French. | History. | Logic. | Geology. | Drill. | Geology. *Anglo-Saxon.* |
| | 2 | Hebrew. French. | History. | Metaphysics. | *Comp. Philol.* | Drill. | *Anglo-Saxon.* |
| | 3 | Hebrew. French. | Polit. Econ. | Moral Philos. | *Comp. Philol.* Astronomy. | Drill. | Thesis. |

### III. COURSES FOR THE DEGREE OF B. PED.

History, Political Economy, and Metaphysics, .....President Patterson.
Botany and Horticulture, .....Professor Mathews.
The English Language and Literature, .....Professor Mackenzie.
Military Science, .....Captain Byroade.
Chemistry, .....Professor Kastle.
Mathematics and Astronomy, .....Professor White.
The Greek and Latin Languages, .....Professor Neville.
German, .....Professor Wernicke.
Pedagogy, .....Professor Roark, Dean.
Ass't Professor White.
Anatomy and Physiology, .....Professor Pryor.
Geology and Zoölogy, .....Professor Miller.
Physics, .....Professor Pence.

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In case the student is prepared, on entering, to read Cicero, he must take German, First Year, third hour, and Second Year, second hour. Othetwise he must take Latin the First Year, and English the Second Year.

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. PED.

| Year | Term | First Hour. | Second Hour. | Third Hour. | Fourth Hour. | Fifth Hour. | Afternoon. |
|---|---|---|---|---|---|---|---|
| Freshman. | 1 | English. | Trigonometry. | German or Latin. | | Drill. | Drawing. |
| | 2 | English. | Solid Geom. | German or Latin. | Physiology. | Drill. | Drawing. |
| | 3 | English. | Algebra. | German or Latin. | Physiology. | Drill. | Gen. Botany. |
| Sophomore. | 1 | Analyt. Geom. | German or English. | Physics. | English. | Drill. | Gen. Botany. |
| | 2 | Analyt. Geom. | German or English. | Gen. Botany. | Chemistry. | Drill. | Physics. |
| | 3 | Analyt. Geom. | German or English. | Gen. Pedagogy. | Chemistry. | Drill. | Physics. |
| Junior. | 1 | Zoölogy | Educat. Psychol. | Logic. | Cicero. | Drill. | Chemistry. |
| | 2 | Palæontology. | City School Problems. | Adv. Psychology. | Livy. | Drill. | |
| | 3 | Mineralogy. | Educat. Economy. | | Livy. | Drill. | Professional Reading. |
| Senior. | 1 | Virgil. | History. | Educational Method. | Astronomy. | Drill. | Gen. Geol. |
| | 2 | Virgil. | History. | Metaphysics. | Hist. Educat. | Drill. | Obs. Work in Pedagogy. |
| | 3 | Cicero. Terence. | Polit. Economy. | Mor. Philos. | Astronomy. | Drill. | Thesis. |

### IV. COURSES FOR THE DEGREE OF B. M. E.

History and Political Economy, .....President Patterson.
The English Language and Literature, .....Professor Mackenzie.
Military Science, .....Captain Byroade.
Chemistry, .....Professor Kastle.
Mathematics, .....Professor White.
Ass't Professor Johnson.
Mechanical Engineering, ..... Professor Anderson, Dean
Machine Design, .....Professor Faig.
Electrical Engineering, .....Ass't Professor Sawyer.
Physics, .....Professor Pence.
Shopwork and Drawing, .....Instructor Frankel.
Assistant Marks.
Experimental Engineering, .....Professor Anderson.
Surveying, Graphic Statics, and Hydraulics, .....Professor Brooks.

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For the Degree of M. E., Steam Engineering, Electrical Engineering, Chemical Engineering, Experimental Engineering, or Machine Designing may be selected as major study; and minor studies will be assigned from Steam Engineering, Electrical Engineering, Chemical Engineering, Experimental Engineering, Machine Designing, Mechanical Laboratory Work, Mathematics, Physics, Chemistry, Mental Science, Political Science, English, and Modern Languages.

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. M. E.

| YEAR | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR. | AFTERNOON. | SATURDAY. |
|---|---|---|---|---|---|---|---|
| FRESHMAN. | English. | Trigonometry. | Model and Object Drawing | Woodwork Mach. Design. | Drill. | ShopWoodwork Bench, Lathe. | ShopWoodwork Bench, Lathe. |
| | English. | Solid Geom. | Physics. | Pattern-Making Foundry Drawing | Drill. | Pattern-Making Foundry. | Pattern-Making |
| | English. | Algebra. | Physics. | Mech. Drawing. | Drill. | Pattern-Making Foundry | Pattern-Making |
| SOPHOMORE. | Analyt. Geom. Algebra. | Chemistry. | Design. | Phys. Laboratory. | Drill. | Iron and Steel Forging. | Mech. Drawing, Elem. Mach. Des. |
| | Analyt. Geom. | Surveying. | Metallurgy. | Descr. Geom. | Drill. | Machine Work. | Mech. Drawing. Des. Descr. Geom. |
| | Analyt. Geom. | Elem't Design | Calculus. | Descr. Geom. | Drill. | Machine Work Surveying | Draw'g Design Descr. Geom. |
| JUNIOR. | Electric Des. | Strength of Materials. | Calculus. | Kinematics. | Drill. | Chem. Lab. Mach. Design. | Kinematics. |
| | Electric Des. | Analytical Mechanics. | Calculus. | Electro-dynam Machinery. | Drill. | Steam and Electric Lab. Mach. Des. | Mach. Design. |
| | Dynamo and Motor Design. | Graph. Statics | Analytic Mechanics. | Electrical Appliances. | Drill. | Steam and Electric Lab. Mach. Des. | Electric Des. |
| SENIOR. | Thermodynamics Hydraulics. | History. | Valve Gears. Steam Boilers | Altern. Currents. Dynam. Mot. Des. | Drill. | Valve and Mach. Design. | Electric Des. |
| | Altern. Currents. Power Plants. | History. | Steam Engine Design. | Dynamometers Meas. P'w'r, Pumps | Drill. | Valve and Mach. Design. | Electric Des. |
| | Thesis. | Polit. Economy. | Photography. | Thesis. | Drill. | Thesis. | Thesis. |

### V. COURSES FOR THE DEGREE OF B. C. E.

History and Political Economy, ..... President Patterson.
The English Language and Literature..... Professor Mackenzie.
Military Scienee, ..... Captain Byroade.
Mathematics and Astronomy,. ..... Professor White.
Chemistry, ..... Professor Kastle.
Civil Engineering,..... ..... Professor Brooks, Dean.
Geology, ..... ..... ..... ..... Professor Miller.
Physics,... ..... Professor Pence.
Analytical Mechanics,..... Professor Faig.
Descriptive Geometry, ..... ..... ..... Ass't Professor Johnson.
Instructor Frankel.
Mechanical Drawing, ..... ..... Instructor Frankel.
Assistant Marks.

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For the Degree of C. E., Railways, Structures, Water Power, Municipal or Mining Engineering, Sanitation; Topographical, Geodetic, or Architectural Engineering may be selected as major study; and minors will be assigned from Mathematics, Astronomy, Mechanical Engineering, Geology, Chemistry, Physics, Political Economy, English, French, and German.

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. C. E.

| Year | First Hour. | Second Hour. | Third Hour | Fourth Hour | Fifth Hour. | Afternoon. | Saturday. |
|---|---|---|---|---|---|---|---|
| Freshman. | English. | Trigonometry. | Drawing. | Mech Drawing. | Drill | Drawing. | Drawing. |
| | English. | Solid Geom. | Physics. | Mech. Drawing. | Drill. | Drawing. | Drawing. |
| | English | Algebra. | Physics. | Mech. Drawing. | Drill. | Drawing. | Drawing. |
| Sophomore. | Analyt. Geom. | Chemistry. | Drawing. | Phys. Laborat. | Drill. | Drawing. | Drawing. |
| | Analyt. Geom. | Surveying | Metallurgy. | Descr. Geom. | Drill. | Drawing | Descr. Geom. |
| | Analyt. Geom. | Elem. Design. | Calculus | Descr. Geom. | Drill. | Surveying, Mapping. | Surveying, Mapping. |
| Junior. | Design. | Strength of Materials. | Calculus. | Elec. Dyn. Mach. Roofs, Bridges. | Drill. | Topog. Survey. Mapping. | Topog. Mapping. |
| | Roofs. Bridges. | Analytical Mechanics. | Calculus. | Stone Cutting. | Drill. | Chem Lab. | Drawing. |
| | Roofs. Bridges. | Graph. Statics. | Anal Mechan. | R. R. Survey. | Drill. | R. R. Survey. | R. R Survey. |
| Senior. | Hydraulics. Geodesy. | History. | Bridge Design. | Astronomy. Construction. Geod. Survey. | Drill. | Geod. Survey. Cement Tests. | Surveying. |
| | Roofs, Bridges, Power Plants. | History. | Sanitary Engineering. | Econom. Geol. | Drill. | Chem. Lab. | Design |
| | Drawing. | Polit Econ. | Design. | Astronomy. | Drill. | Thesis. | Thesis. |

### VI. COURSES FOR THE DEGREE OF B. AGR.

History, Political Economy, and Metaphysics,.....President Patterson.
Agriculture, Horticulture, and Botany,.....Professor Mathews, Dean.
The English Language and Literature,.....Professor Mackenzie.
Military Science, .....Captain Byroade.
Chemistry, .....Professor Kastle.
Mathematics and Astronomy,.....Professor White.
The French and German Languages,.....Professor Wernicke.
Entomology, .....Professor Garman.
Anatomy and Physiology,.....Professor Pryor.
Geology and Zoology,.....Professor Miller.
Physics,.....Professor Pence.
Drawing,.....Professor Muncy.

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For the degree of M. Agr., Agricultural Chemistry, Horticulture, Entomology, or Economic Botany may be selected as major study ; and minors will be assigned from Agricultural Chemistry, Horticulture, Entomology. Zoology, Geology, and Botany.

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. AGR.

| Year | Term | First Hour. | Second Hour. | Third Hour. | Fourth Hour. | Fifth Hour. | Afternoon. |
|---|---|---|---|---|---|---|---|
| Freshman. | 1 | English. | Trigonometry. | German. | | Drill. | Drawing. |
| | 2 | English. | Solid Geometry. | German. | Physiology. | Drill. | Drawing. |
| | 3 | English. | Algebra. | German. | Physiology. | Drill. | Entr. Botany. |
| Sophomore. | 1 | Zoölogy. | German. | Physics. | English. | Drill. | Gen Botany. |
| | 2 | | German. | Gen. Botany. | Chemistry. | Drill. | Zoölogy. |
| | 3 | Mineralogy. | German. | Syst. Botany. | Chemistry. | Drill. | Zoölogy. |
| Junior. | 1 | | Plant. Histology. | Econom. Botany. | French. | Drill. | Lab. Chem. |
| | 2 | Entomology. | Agriculture. Horticulture. | Fertiliz. Dairy. | French. | Drill. | Horticul. Dairy. |
| | 3 | Hortic. Entomol. | Plant Physiology. | Econom. Botany | French. | Drill. | |
| Senior. | 1 | | History. | Logic. | Thesis. | Drill. | Agricul. Chem. |
| | 2 | | History. | Metaphysics. | Econ. Geol. | Drill. | Thesis. |
| | 3 | | Polit. Econ. | Moral Philos. | Astronomy. | Drill. | Thesis. |

## SCHEDULE OF STUDIES FOR THE TWO YEARS' COURSE IN AGRICULTURE.

| Year. | Term | First Hour. | Second Hour. | Third Hour | Fourth Hour. | Fifth Hour. | Afternoon. |
|---|---|---|---|---|---|---|---|
| First Year. | 1 | English. | Trigonometry. | | Physiology. | Drill. | Gen. Botany. |
| | 2 | English. | Solid Geom. | Gen. Botany. | Chemistry. | Drill. | Zoology. |
| | 3 | English. | | System. Botany. | Chemistry. | Drill. | Zoology. |
| Second Year. | 1 | Zoölogy. | Plant Histology. | Econom. Botany. | English. | Drill. | Agricultural Chemistry |
| | 2 | Entomology. | Agriculture. Horticulture. | Fertilizers. Dairy. | Economic Geology. | Drill. | Horticulture. Field Work. Dairy. |
| | 3 | Horticulture. Entomology. | Plant Physiology. | Econom. Botany. | Astronomy. | Drill. | |

### VII. COURSES FOR THE DEGREE OF B. E. M.

| | |
|---|---|
| History and Political Economy | President Patterson. |
| Mining Engineering, Ore Dressing | Professor Norwood, Dean. |
| The English Language and Literature, | Professor Mackenzie. |
| Mathematics, | Professor White. |
| Surveying and Hydraulics | Professor Brooks. |
| Mechanical Engineering, | Professor Anderson. |
| Geology and Mineralogy, | Professor Miller. |
| Chemistry and Metallurgy, | Professor Kastle. |
| Physics, | Professor Pence. |
| Analytical Mechanics, | Professor Faig. |
| Electrical Engineering, | Ass't Professor Sawyer. |
| Descriptive Geometry, | Ass't Professor Johnson. |
| | Instructor Frankel. |
| Shopwork and Drawing, | Instructor Frankel. |
| | Assistant Marks. |

For the degree of E. M., Metallurgy, Ore Dressing, Milling, Mine Engineering, Mine Plant, Mine Development, or Deep Mining may be selected as major study; and minor studies may be assigned from Civil Engineering, Mechanical Engineering, Electrical Engineering, Geology, Chemistry, Physics, Mathematics, Political Economy, English, French and German.

## SCHEDULE OF STUDIES FOR THE DEGREE OF B. E. M.

| Year | First Hour. | Second Hour. | Third Hour. | Fourth Hour. | Fifth Hour. | Afternoon. | Saturday. |
|---|---|---|---|---|---|---|---|
| Freshman. | English. | Plane Trigon. | Drawing. | Woodwork Mech. Drawing. | Drill. | ShopWoodwork Bench, Lathe. | ShopWoodwork Bench, Lathe. |
| | English. | Solid Geom. | Physics. | Mech. Drawing. | Drill. | Free-hand Drawing. | Drawing. |
| | English | Algebra. | Physics. | Mech. Drawing. | Drill. | Drawing. | Drawing. |
| Sophomore. | Analyt. Geom. | Chemistry. | Phys. Laboratory. | Geology. | Drill. | Mech. Drawing. | Iron and Steel Forging. |
| | Analyt. Geom. | Surveying | Metallurgy. | Descr. Geom. | Drill. | Phys Laboratory. | Descr. Geom. Drawing. |
| | Analyt. Geom. | Elem. Design. | Calculus | Descr. Geom. | Drill. | Surveying, Mapping. | Surveying, Mapping. |
| Junior. | Electricity. Magnetism. | Mechanics of Materials. | Calculus. | Dyn. Elec. Mach. Mining 1, 2. | Drill. | Chemistry of Metals. | Surveying. Mapping. |
| | Mining 3. | Analytical Mechanics. | Calculus. | Electro-dynam. Machinery. | Drill. | Metallurgy. Assaying. | Assaying. |
| | Mineralogy. | Mining 3. Mining 6. | Anal. Mechan. | Electrical Appliances. | Drill. | Quant. Analysis. | R. R. Survey. |
| Senior. | Hydraulics. Steam Engine. Compressed Air. | History. | Mining 7. | Steam Boilers. | Drill. | Mining 4. Mining 5. | Mine Survey 6. |
| | AlternatingCur. Power Plants. | History. | Mining 7. Mining 8. | Econ. Geology. | Drill. | Mine Maps 6. | Mine Plant Design. |
| | Mine Plant Design. | Polit. Econ. | Mining 8. Mining 9. Mining 10. | Design. Thesis. | Drill. | Design. Thesis. | Thesis. |

## THE NORMAL SCHOOL.

RURIC NEVEL ROARK,
PRINCIPAL.

MILFORD WHITE,
JOSEPH WILLIAM PRYOR,
JAMES EDWARD WINSTON,
THEODORE TOLMAN JONES,
MARTHA RIPPERDAN WHITE,
BESSIE LEE MONSON,
ASSISTANTS.

## THE NORMAL SCHOOL.

The Normal School prepares teachers for service in the rural schools and elementary graded schools of the State. It comprises three courses, corresponding to the three classes of certificates named in the School Law, viz.: State Diploma, State Certificate, and County Certificate.

*The State Diploma Course* is made up of all the common school subjects and, in addition, Higher Arithmetic, Algebra, Plane Geometry, Elementary Physics, Elementary Latin, and Psychology. The State Diploma is a life certificate.

*The State Certificate Course* comprises, besides the common school branches, the advanced subjects of Higher Arithmetic, Algebra, English and American Literature, and Psychology. The State Certificate is valid for eight years, in all parts of the State, and is renewable for another eight years.

*The County Certificate Course* is made up of the common school subjects in which applicants for a county certificate must be examined.

*Other branches* will, it is now expected, be provided for in 1905, and thereafter. These branches will be Penmanship, Freehand Drawing, Vocal Music, and Nature Study. Of these, only Penmanship is required in most schools of the State; but it will not be many years until the others also will be required. In fact, Drawing, Vocal Music, and Elementary Scienee are now demanded in not a few graded schools. The Normal School of the State College aims not only to prepare teachers to meet the bare requirements of the law, but to fit them also both to create and to satisfy a popular demand for the teaching of all the subjects of the best modern elementary curriculum.

Capable students in either of the lower courses, may, with the consent of the Dean, take advanced branches in the State Diploma Courses.

*General Pedagogy—Theory and Practice*—constitutes a special feature of each course throughout each term of the year. This class is a purely professional one, in which all questions pertaining to the organization, management, and teaching of elementary schools are fully discussed. Participation in the work of this class is vital to the best success of the teacher.

*Forensics*, a thorough training in the practice of public speaking, is a special advantage offered by the Normal School. The whole school is placed in sections sufficiently small to enable each student to get the benefit that comes from frequent practice in forensics. The work is in charge of the Dean.

*City examinations* are provided for in the several courses above named. Many city school boards in the State accept the State Certificate. In other cases, a course preparatory to a special examination can be made up out of the regular courses described in the preceding paragraphs.

*County Superintendents and Examiners.* Although the Normal School has not heretofore had proper facilities for especially fitting County Superintendents and County Examiners for their distinctive work, yet fifteen per cent. of the present County Superintendents in the State have been prepared here for their examination for eligibility, and for the more successful discharge of their official duties. Very many County Examiners have also had their preparation in the Normal School.

It is intended to offer in the session of 1904–05, and thereafter, special courses for those who desire to prepare for service as County Superintendents. These courses will comprise, in addition to the required academic studies, special instruction in Psychology, General Pedagogy, and in School Law.

*Text-Books:* In the Professional Course the text-books are those used in the same branches in the otber four years' courses of the College. In the work in Pedagogy the books used are Roark's Psychology in Education, Roark's Method in Education, White's and Baldwin's School Management, and Seeley's History of Education. In the County Certificate Course the books used are Dubb's Aritbmetic, Peterman's Civil Goverment, Chittenden's Elements of English Composition, Natural Advanced Geograpby, Holbrook's Complete Grammar, Montgomery's History of the United States, Kinkead's History of Kentucky, Martin's Human Body (smaller edition), Roberts' Rules of Order, and Roark's General Outline of Pedagogy. In the State Diploma and State Certificate Courses, besides tbese books, Wentworth's Higber Algebra, Jobnson's History of English and American Literature, and Blaisdell's First Steps witb Englisb and American Autbors also are used.

### APPOINTMENTS.

Each legislative district of the State is entitled to send to the Normal School every year four properly appointed students, of either sex. Appointments are made by the County Superintendents (see page 129, Section 14, 15, and 16, School Law of 1900) between the first day of July and the thirty-first day of December. Appointments should be certified to the President of the State College as soon as they are made. Appointees secure all the advantages indicated on page ——. They do *not* receive mileage unless they remain in school the *full collegiate year.*

Appointments to the Normal School are good for one year. Those who are ready to enter the Freshman Class of the full four years' Professional Course should see that their appointments are made for the *College* and not for the Normal School. Appointments made for that course as a college course are good for four years.

### CALENDAR.

Tbe First Term opens September 8, 1904.
The Second Term opens January 2, 1905.
Tbe Third Term opens Marcb 13, 1905.

Students should enter as early in the term as possible.

## SCHEDULE FOR THE STATE DIPLOMA.

| TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR |
|---|---|---|---|---|---|
| 1 | Latin. | Pedagogy. | Physics. | Algebra. | Drill. |
| 2 | Literature. | Psychology. | Higher Arithmetic. | Plane Geometry. | Drill. |
| 3 | Literature. | Algebra. | Higher Arithmetic. | Plane Geometry. | Drill. |

## SCHEDULE FOR THE STATE CERTIFICATE.

| TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR. |
|---|---|---|---|---|---|
| 1 | Literature. | Pedagogy. | Higher Arithmetic. | Algebra. | Drill. |
| 2 | Literature. | Psychology. | Higher Arithmetic. | Algebra. | Drill. |

## SCHEDULE FOR THE COUNTY CERTIFICATE.

| TERM | FIRST HOUR. | SECOND HOUR. | THIRD HOUR. | FOURTH HOUR. | FIFTH HOUR. |
|---|---|---|---|---|---|
| 1 | Grammar. | Arithmetic. | U. S. History. Physiology. | Geography. | Drill. |
| 2 | Grammar. Civics | Arithmetic. Pedagogy. | Geography. Physiology. | Composition. | Drill |
| 3 | Grammar. Composition. | Arithmetic. Geography. | Civics, Physiology. Pedagogy. | U. S. History. | Drill. |

## THE ACADEMY.

WALTER KENNEDY PATTERSON,
PRINCIPAL.

JOHN LEWIS LOGAN,
JOSEPH MORTON DAVIS,
VICTOR EMANUEL MUNCY,
JAMES EDWARD WINSTON,
ASSISTANTS.

The Academy is under the immediate direction and management of the Principal and four Assistants.

The students are subject to the same rules and regulations as the students of the College. Their attendance at the College is required only during the hours of recitation and other prescribed College exercises, the preparation of their lessons being made elsewhere.

The courses of study in the Academy are provided for those who enter directly from the common schools, and are intended to supply the necessary training intermediate between the Freshman class of the College and the course of study prescribed by the State Board of Education for the common schools.

Every applicant, to be admitted to the Academy, is required to pass a satisfactory examination in Spelling, Reading, Writing, Geography, History of the United States, English Grammar, and Arithmetic.

County appointees must present Certificates of Appointment, made on actual examination held in pursuance of *law* by a County Board of Examiners, duly appointed for that purpose by the County Superintendent.

Applicants from the public schools of Lexington must present certificates from the School Board setting forth that they have completed the eighth-grade studies.

Other applicants must present certificates from their County Superintendent, or from the Principal of their High School, setting forth that they have completed the common school course prescribed by the State Board of Education.

Those who enter at any other time than the beginning of the year will be required to pass a satisfactory examination on the work already gone over by the classes they propose to enter.

Students matriculating in the Academy will be required to pursue one of its prescribed courses of study, and will not be permitted to take any work outside of this course except on the recommendation of the Principal.

### ENTRANCE EXAMINATION.

For the benefit of those, other than county appointees, who desire to know the character of the examination which applicants for admission will be required to pass, the following examination papers are submitted as a sample. It is not to be understood that these are the questions on which applicants will be examined, but that they indicate the minimum attainments necessary to enter the Academy of the College. Those who expect to enter more advanced classes will be required to pass an examination on all that the class which they propose to enter has passed over.

### I. ARITHMETIC.

Find the greatest common divisor and the least common multiple of 899 and 961.

Simplify $2\frac{1}{4} \times \frac{10\frac{3}{4} - 4\frac{1}{12}}{6\frac{3}{16} \times 7\frac{2}{3}} \div \frac{3\frac{5}{11}}{1\frac{2}{5} + 9\frac{1}{11}}$

Find the number of bushels that will fill a bin 8.5 feet long, 4.5 feet wide, 3.5 feet deep.

The longitude of Rome is 12° 27′ 14″ east; the longitude of Chicago is 87° 35′ west; find the difference in time between the two places.

What will be the cost of plastering the walls and ceiling of a room 24 feet 4 inches long, 20 feet wide and 12 feet 6 inches high, at 27 cents per square yard, if 20 square yards be deducted for doors, windows, and base-boards?

If a train at the rate of $\frac{5}{13}$ of a mile per minute takes $3\frac{1}{2}$ hours to reach a station, how long will it take at the rate of $\frac{7}{15}$ of a mile per minute?

A and B can do a piece of work in $2\frac{1}{2}$ days, and A and C in $3\frac{1}{3}$ days, B and C in $4\frac{1}{4}$ days. Required the time in which all three working together can do the work, and in which each can do the work alone.

A farmer sowed 5 bushels, 1 peck, 1 quart of seed, and harvested from it 103 bushels, 3 pecks, 5 quarts. How much did he raise from a bushel of seed?

Reduce 9 square chains, 11.25 square rods, to the decimal of an acre.

If a bar of iron $3\frac{1}{3}$ feet long, 3 inches wide, $2\frac{3}{4}$ inches thick weighs 93 pounds, what will be the weight of a bar $3\frac{3}{8}$ feet long, 4 inches wide, and $2\frac{1}{2}$ inches thick?

### II. ENGLISH GRAMMAR.

Name, define, and give examples of all the parts of speech.

Define a phrase, a clause, and give examples of each.

What are the only verbs that can be in the passive voice? Why?

Write a complex sentence containing a noun clause; one containing an adjective clause; one containing an adverbial clause.

Analyze the following sentence, and parse all the words in full:

"The soldiers of the Tenth Legion, wearied by their long march and exhausted from want of food, were unable to resist the onset of the enemy."

### III. GEOGRAPHY.

What are the circles of the earth?

What are the meridians?

Define latitude and longitude.

What two meridians bound the hemispheres?

Define the two principal forms of government.

Bound North America and describe its political divisions.

Why is the climate of Western Europe different from that of America in the same latitudes?

Describe the mountains, principal rivers, and lakes of Asia.

Describe the natural routes of commerce.

### IV. HISTORY.

What section of the United States was first explored by the Spanish? French? English?

Give a concise description of the settlement of Plymouth, Jamestown, New York City, and name their distinctive characteristics.

Define Charter, Proprietary, and Royal government as applied to the colonies, and name the colonies that were under each of these forms of government.

Name the three principal causes of the Revolutionary War.

What was the main cause of the War of 1812?

What caused the Mexican War?

Give the leading political differences between the North and the South at the opening of the Civil War.

Name the three departments of the Government under the Constitution, and define the duties of each.

# ASSOCIATIONS.

### THE UNION LITERARY SOCIETY.

This, the oldest of the four literary associations connected with the State College, was formed in 1872 by the consolidation of the Yost Club and the Ashland Institute, and operates under a charter from the Legislature. It occupies a commodious and well-furnished hall in the Gymnasium and is supplied with a library due in part to an appropriation from the State. Besides the weekly meetings devoted to declamations, essays, and debates, the Society holds on the 22d of February an annual contest in oratory, and awards to the successful competitor a gold medal provided by the alumni.

### THE PATTERSON LITERARY SOCIETY.

This Society, formed in 1887, and at the suggestion of Gov. Knott named in honor of the President of the College, was chartered in 1888. It is provided with a handsome room and a good library. The annual oratorical contest is held on the 26th of March, the birthday of the President, who presents the first prize, a gold medal. The second, also a gold medal, is the gift of Mr. George W. Crum, of Louisville.

### THE PHILOSOPHIAN SOCIETY.

The Philosophian Society, formed by the young women of the College in 1882 for literary improvement and social pleasure, offers, besides the usual weekly meetings, a public entertainment consisting of declamations, essays, criticisms, and orations.

### THE ENGINEERING SOCIETY.

This body, composed of matriculates in either course of engineering, meets on the third Friday of each month. The exercises consist of a paper read by a member on some pertinent topic, followed by a general discussion. During the year the Society is occasionally favored with lectures by experienced engineers not connected with the College.

### ATHLETICS.

Opportunity for physical exercise and legitimate outdoor sport is afforded by the spacious Athletic Field and Parade Ground. The management of athletics by the students is vested in an Athletic Association formed by the union of the Football, the Baseball, and Track-athletic Societies. The officers of these three sub-organizations constitute the managing board of the Athletic Association. The control of athletics by the Faculty is secured through their Committee on Athletics, acting under a set of regulations adopted by the Faculty and approved by the Trustees.

### CHAUTAUQUA REPRESENTATIVE.

An oratorical contest under the auspices of the Literary Societies, but open to every bona fide student of the College, is held on the last Tuesday afternoon before Commencement to select a representative to speak at the Lexington Chautauqua.

## ALUMNI.

### 1869.

Munson, William Benjamin, B. S.,.....Denison, Texas.

### 1870.

Munson, Thomas Volney, B S.,.....Denison, Texas.

### 1871.

Harding, Enoch, B. S.,.....Fort Worth, Texas.

### 1874.

Carswell, Robert Emmett, B. S.,.....Decatur, Texas.
Dean, John Allen, B. S., .....Owensboro.
Hardin, Thomas Rollins, B. S., .....Ruston, La.
Smith, Edward Everett, B. S.,.....Chicago, Ill.

### 1875.

Brown, Edgar Thomas, B. S.,.....Chicago, Ill.

### 1877.

Floete, Franklin, B. S , .....St. Paul, Minn.
Ward, Ballard Preston, B. S.,..... Speedwell Va.

### 1878.

Cole, Moses Salvador, B. S.,.....Rivas, Nicaragua.
*Mackie, Mahlon, B. S., .....Mt. Sterling.

### 1879.

Blakely, Charles Graham, B. S,, .....Topeka, Kansas.
Hays, Napoleon Bonaparte, B. S.,.....Frankfort.
Perry, Caleb Sykes, B. S.,.....Indianapolis, Ind.
Wright, Henry Moses, B. S., .....Alton Park, Tenn.

### 1880.

*Crawford, James, B. S., ..... Lexie, Tennessee.
Peter, Alfred Meredith, B. S., .....Lexington.
Weller, Nicholas John, B. S.,.....Pineville.
Whatley, George Croghan, B. S.,.....Birmingham, Ala.

### 1881.

Pence, Merry Lewis, B. S.,.....Lexington.

### 1882.

*Berry, George G , B. S.,.....Lexington.
De Roode, Louis Kuinders, A. B., .....New York.
Patterson, John Letcher, A. B.,.....Louisville.
Rogers, Edward Lee, A. B., .....Lexington.
Shackleford. John Armstrong, A. B.,.....Tacoma, Wash.
Stoll, John William, A. B., .....Lexington.

*Deceased.

1883.

*King, William Elijah, B. S., .....Nelson County.
Taylor, James W., A. B.,..... .....New Castle.

1884.

Eubanks, Burton Prendergast, B. S., .....Dallas, Texas.
Graves, Clarence Scott, B. S.,.....Lexington.
*Jones, Henry Clay, B. S., .....Monticello.
Kastle Joseph Hoeing, B. S., .....Lexington.
Ramsey, Russell Thomas, B. S., .....Denver, Col.
Riley, Otis Violette, B. S., .....Pineville.

1885.

De Roode, Rudolph John Julius, B. S.,.....Glens Falls, N. Y.
Gess, George Thomas, B. S.,.....Lexington.
Gordon, John Crittenden, B. S., .....Eminence.
Lambuth, William David, A. B.,.....Seattle, Washington.
Scott, James Russell, B. S.,.....Lexington.
*Thornbury, William Garland, B. S., .....Brooklyn, N. Y.

1886.

Morgan, Thomas Hunt, B. S., .....Bryn Mawr. Pa.
*Prewitt, Robert Lee, A. B.,..... .....Memphis, Tenn.
Prewitt, William C., A. B.,.....Fort Worth, Texas.

1887.

Hifner, Kearney Lee, B. S., .....Lexington.
Shackleford, Thomas Wheatley, A. B.,.....New York.

1888.

Bartlett, Frederick Vincent, B. S., .....Lexington.
Bryan, George Gist, B. S.,..... Norfolk, Va.
Curtis, Henry Ernest, B. S.,.... .....Lexington.
Gunn, Belle Clement, B. S.,.....Springfield, Ohio.
Payne, Robert Treat, B. S., ..... ..... ..... ..Athens.

1889.

Ellershaw, Edward, A. B., ..... .....Bristol, Eng.
Frazer, Hugh Miller, B. S.,.....Lexington.
*Patterson, William Andrew, B. S.,..... ..... Lexington.
Prewitt, Annie Gist, B. S., ..... ... .Lexington.
Walker, Robert Bernie, B. S., .....St. Louis, Mo.

1890.

Anderson, Richard Thomas, Jr., B. S.,.....Lexington.
Baker, Annie Jane, B. S., ..... .....Lexington.
Brock, Charles Robert, B. S.,.....Denver, Col.
Forston, Keene Richards, B. S., ..... .....Nicholasville.
Gunn, John Wesley, C. E,,.....Lexington.

*Deceased.

Hoeing, Charles, A. B.,, .....Rochester, N. Y.
Wilson, Margaret Agnes, B. S.,.....Deadwood, Coi.
Yates, James Anderson, B. S., .....Ottawa, Kansas.

1891.

Berry, Henry Skillman, B. S.,.....Lexington.
Clardy, U. L., B. S., .....Goodwill, S. D.
Muncy, Victor Emanuel, B. S.,.....Lexington.
Wallis, William Russell, C. E., .....Friar's Point, Miss.
Warner, B. Callie, B. S., .....Lexington.

1892.

Cox, Arthur Melville, A. B., .....Cynthiana,
Elkin, Fielding Clay, B. S.,.....Lexington.
Hunt, Irene Leonora, B. S., .....Lexington.
Maxey, John Gee, A. B., .....Louisville.
Page, William Seabury, C. E.,.....Danville, Wash.
Pottinger, Samuel Lancaster, A. B., .....Louisville.
*Reynolds, Frank Craig, C. E., .....Lexington.
Scovell, Frank Elmer, C. E.,.....Chamois, Mo.
Shaw, Hiram, Jr., B. S., .....Chicago, Ill.
Shelby, Isaac Prather, C. E.,.....Lexington.
Southgate, Butler Turpin, A. B., .....Lexington.

1893.

Adams, Katherine Innis, A. B., .....Albuquerque, N. Mex.
Bryan, John Irwin, B. S., B. M. E., '95,.....Boston, Mass.
Courtney, Edmund, B. Ped., .....Neave.
Gunn, Henry Martin, B. S.,.....Mt. Sterling.
Hobdy, William Cott, B. S , .....Honolulu, H. I.
Johnson, James Richard, B. M. E., .....Lexington.
McFarlin, John William, B. S.,.....Franklin.
Railey, Morton Sanders, C. E., .....Washington, D. C.
Roberts, Daniel Stillwell, B. Ped., A. M., '01.....Louisville.
Smith, Denny Perryman, B. S., .....Cadiz.
Speyer, Rosa, B. S., .....Leipzig, Germ.
Ware, Cora E., B. Ped., .....Pineville, La.
White, Milford, C. E., M. S., .....Lexington.
Willis, Benjamin Grant, B. S., .....Lexington.

1894.

Aulick, Edwin Chesterfield, A. B., .....Louisville.
Bradshaw, George Dickie; B. Ped., .....Chicago, Ill.
Brand, Edward, A. B., .....East Lake, Ala.
Curtis, Carlton Coleman, B. S., .....Babylon, N. Y.
Faig, John Theodore, M. E., .....Lexington.
Garred, Ulysses Anderson, B. M. E., .....Anaconda, Mont.
*Griffing, Emma Rosetta, B. S., .....Lexington.

*Deceased.

Hays, James Morrison, A. B., .....Barbourville.
Hughes, Leonard Samuel, B. S., .....Manila, P. I.
Jones, Mattison Boyd, A. B., .....Los Angeles, Cal.
Keiser, Benjamin Christopher, B. S., .....St. Louis, Mo.
Kroesing, Lillie, B. S., .....Lexington.
Newton, Nathan Alexander, B. M. E., .....Oil City, Pa.
Norman, Albert Clift, B. M. E., .....Savannah, Ga.
Oots, Nina Pearl, B. S., .....Richmond.
Shelby, Katherine, B. S., .....Lexington.
Sledd, Dora, B. Ped., .....Chicago, Ill.
Trigg, William Clay, C. E., .....Ullin, Ill.
Warner, Hattie Hocker, B. S., .....Honolulu, H. I.

1895.

Atkins, Mary Lyons, B. S., .....Lexington.
Barker, Lanis Spurgeon, B. S., .....Ocala, Fla.
Bush, Henry Skiilman, B. S., .....Lexington.
Didlake, Mary LeGrand, B. S., M. S., .....Lexington.
Downing, Joseph Milton, B. M. E., .....Jackson, Tenn.
Faulkner, John Vick, C. E., .....Simon, Ind. Ter.
Fitzhugh, Lucy Stuart, A. B., A. M., '96 .....Lexington.
Foster, Nettie Belle, B. S., .....Lexington.
King, Elizabeth Whittington, A. B., A. M., '96, ...Ft. Wayne, Ind.
Lewis, Thomas Stone, A. B., .....Lexington.
McConathy, James Asa, B. S., .....Kirklevington.
McCaughliffe, Mary Catherine, B. S., .....Lexington.
Murrill, Paul Ingoid, B. S., .....Woodbury, N. J.
Newman, Roberta, B. S., .....Lexington.
Reynolds, Nellie Anna, B. S., .....Lexington.
Stoll, Richard Charles, A. B., .....Lexington.
Weaver, Rufus Lee, B. S., .....New York.
Wilmott, John Webb, A. B., .....Wewoka, I. T.
Woods, John Joseph, A. B., .....Lexington.

1896.

Alford, Smith Edison, A. B., .....Ellwood, Pa.
Carnahan, James William, A. B., .....Toledo, O.
Case, Daniel Morris, B. M. E., .....Georgetown.
Davidson, Harry Adolph, C. E., .....Louisville.
Dean, Thomas Roland, A. B., .....S. McAlister, I. T.
Duck, Alice, B. S., .....Lexington.
Dunlap, John Jennings, A. B., .....Lancaster.
Kerrick, Feiix, A. B., A. M., '01 .....Louisville.
Lyle, Joseph Irvin, B. M. E., .....New York.
McDowell, Edward Campbell, B. M. E., .....Jackson, Tenn.
Orman, Henry, B. M. E., .....Danville.
Trigg, John Henry, B. S., .....New Columbus.
Woods, John Wesley, A. B., .....Ashland.

## 1897

Allen, William Raymond, A. B., ..... Chetocah, I. T.
Anderson, Henry Clay, B. M. E., ..... Ann Arbor, Mich.
*Atkins, Antoinette Thornton, B. S., ..... Lexington.
Blessing, George Frederick, B. M. E., ..... Reno, Nev.
Bullock, Samuel Archibald, B. M. E., ..... St. Paul, Minn.
Cassidy, Elizabeth, B. S., ..... Lexington.
Clarke, Mary Eva, B. S., ..... Lexington.
Collier, William Henry, B. M. E., ..... Jackson, Tenn.
DeBow, Samuel Carruthers, B. M. E., ..... Jackson, Tenn.
Downing, George Crutcher, B. Ped., ..... Frankfort.
Duck, Berkley Wilson, B. M. E , ..... Indianapolis, Ind.
Duncan, William Adolphus, B. M. E., ..... Nashville, Tenn.
Frazer, Joseph Christie, B. S., ..... Baltimore, Md.
Geary, John Thomas, B. S., ..... U. S. Army.
Gordon, Robert Lee, A. B., A. M., '98, ..... St. Louis, Mo.
Gunn, Clara Brooke, B. S., ..... Lexington.
*Haley, John Thomas, B. S., ..... Fayette County.
Hendren, James Harry, B. S., ..... Speedwell.
Hicks, Arthur Lee, A. B., ..... Ashland.
Kelly, Thomas Conway, B. M. E., ..... Milwaukee, Wis.
McHargue, Barbara Susan, B. S., ..... London.
Morgan, George Matt, B. S., ..... Cincinnati, Ohio.
Pope, Robert Lee, A. B., ..... Williamsburg.
Scott, John, A. B., ..... San Antonio, Texas.
Searcy, Lulu, B. Ped., ..... Lexington.
Simrall, James Orlando Harrison, A. B., ..... Lexington.
Warner, Logan Hocker, B. S., ..... LaFollette, Tenn.
White, Martha Ripperdan, B. S., M. S., ..... Lexington.

## 1898.

Brock, George Green, A. B., ..... London.
Brock, Lafayette Breckinridge, B. S., ..... Lexington.
Cahill, William James David, B. M. E., ..... Lexington.
Campbell, Thomas Luther, A. B., ..... Memphis, Tenn.
Carpenter, William Thomas, B. M. E., ..... Vallejo, Cal.
Farley, Frank Preston, A. B., ..... Flatlick.
Hammock, David William, B. S., ..... Cane Creek.
Hamilton, Thomas Smith, B. M. E., ..... Louisville.
Johnson, Jack Stubblefield, A. B., ..... Muir.
King, Margaret Isadore, A. B., ..... Lexington.
Loevenhart, Arthur Solomon, B. S., ..... Baltimore, Md.
Loevenhart, Edgar Charles, B. M. E., ..... Chicago, Ill.
Lucas, Ida West, A. B., ..... Ellwood, Pa.
Straus, Charles Louis, B. M. E., ..... Lexington.

*Deceased.

Terry, Lila Beatrice, A. B.,.....Paris.
Trosper, Henderson Taylor, A. B.,.....London
Turner, Job Darbin, B. Ped., .....Lexington.
Ward, Paul Sterling, B. M. E., .....Cincinnati, Ohio.
Wilson, Henry Clay, A. B., .....Cynthiana.

1899.

Allen, Leonard Barnes, B. C. E., .....Whitehouse.
Brock, Walter Lucas, A. B., .....London.
Bronaugh, Will Logan, B. M. E.,.....Chicago, Ill.
Bullock, Frederick Dabney, B. S., ..... .....Lexington.
Bullock, Joseph Hunt, B. S., .....Charlottesville, Va.
Butler, Frances Victor, A. B., A. M., '02, .....Nicholasville.
Copland, Alexander Chisholm, B. C. E., .....Lexington.
Cox, Jane Bramblett, A. B., ..... .. .....Brewton, Ala.
Davidson, Joseph Ernest, B. C. E., .....Louisville.
Graves, Leila May, B. S., .....Lexington.
Grinstead, Wrenn Jones, A. B.,. .....Adelaide, Australia.
Horton, Minnie Leigh, A. B.,.....Camargo.
Hughes, James William, B. M. E.,..... .....Quincy, Mont.
Jett, Carter Coleman, B. M. E., ..... Alleghany, Pa.
Johnston, Philip Preston, B. M. E.,.....Lexington.
Maddocks, Roydon Keith, B. C. E., .....Wehrum, Pa.
Marks, Samuel Blackburn, B. S., ..... .....Versailles.
Morrow, Joseph, B. Ped., ..... .....Rankin.
Roberts, George, B. Ped., M. S., ..... .....Berkeley, Cal.
Sherffius, William Henry, B. S., .....Lexington.
Scholtz, Theodore Walter, B. M. E., .....East Pittsburg, Pa.
Simpson, Eugene Irwin, A. B., A. M., B. M. E., Lexington.
Smith, Sidney Allan, A. B., .....Louisville.
Vance, Arthur John, B. M. E., .....Cleveland, Ohio.
Warren, Richard Evans, A. B., ..... .....Georgetown.
Willmott, Jennie Walker, B. S.,..... Cleveland, Ohio.
Young, Bradley Woodruff, B. S., .....Cincinnati, Ohio.

1900.

Allen, Robert McDowell, A. B., ..... .. .....Lexington.
Bowden, Mary Willa, A. B., .....Paris.
Brock, David Morris, B. C. E.,..... .....Norfolk, Miss.
Cornett, Charles George, B. Ped., .....Prineville, Oregon.
Cox, Lula May, B. S., .....Lexington.
Darling, Lewis Andrew, B. M. E., .....Palo Alto, Cal.
Frankel, Leon Kaufman, B. M. E., .....Lexington.
Graham, James Hiram, C. E., .....Knoxville, Tenn.
Graves, James Madison, B. M. E., .....Pittsburg, Pa.
Gunn, John Tevis, A. B., .....Corsican, Texas.
Hestand, John Emerson, B. S., .....Edmonton.
Hundley, Leslie, B. S.,.....Rome.

Johnston, John Pelham, B. M. E., ..... Lexington.
Johnston, Marins Early, B. S., .....Lexington.
Jones, Thomas Almon, A. B., ..... .....Creelsboro.
Lester, Arthur Vane, B. C. E.,.....Richmond, Va.
McCarty, William Carpenter, B. S.,..... .....Louisville.
Musselman, Joseph Franklin, B. M. E.,... .. . .....Louisville.
Neal, Mary Eliza, A. B.,..... ..... .....Paris.
Nichols, Thomas Ashbrook, B. M. E., .....Pittsburg, Pa.
Peyton, Nellie Evans, B. S., .....Lexington.
*Ragan, Leonidas, A. B., .....Shearer Valley.
Reed, Jewett Villeroy, B. S., ..... .....Louisville.
*Rieser, Eugene Feist, B. M. E.,.....Louisville.
Scrugham, James Graves, B. M. E.,.....Reno, Nev.
Smith, Albert Elias, B. S.,.....Owensboro.
Smith, Joshua Soule, B. M. E., .....Lexington.
Spears, Miranda Louise, B. S.,.....Santa Rosa, N. Mex.
Wilson, James Buckley, B. M. E., .....Louisville.

1901.

Bassett, Henry Preston, B. S., .....Cynthiana.
Bewlay, Harry, B. M. E., .....Chicago, Ill.
*Blessing, Charles Albert, B. M. E., .....Buffalo, N. Y.
Bliss, Charlotte Miriam, A. B.,.....Louisville.
Bradley, Charles Walter, B. M. E.,.....Norfolk, Va.
Butler, Nannie Etta, B. S., .....Lexington.
Craig, William James, A. B.,.....Owensboro.
Cutler, Frank Garfield, B. M. E.,..... .....Chicago, Ill.
Dabney, Albert Smith, A. B., ..... Cadiz.
Daugherty, Frank, B. M. E.,.....Pittsburg, Pa.
Ellis, Nicholas Henry, B. Ped., .....Faywood.
Gilbert, John Whittington, B. S., .....Lawrenceburg.
Gordon, Mary Logan, A. B.,.....Eminence.
Hailey, George Hereford, B. C. E., .....Springfield, Ill.
Hardin, Calvin Evans, B. S.,..... ..... Sibley, La.
*Humphrey, Claude Loecher, B. M. E.,.....Lexington.
Hunt, Robert Bruce, B. M. E.,.....St. Augustine, Fla.
Johnson, William Piatt, B. Ped.,.....Frederickstown, Mo.
Jones, Leila Eleanor, B. Ped.,.....Eminence.
Kaufman, Philip Levy, B. M. E.,..... ... Chicago, Ill.
Klein, Garnet Rosel, B. M. E., .. .....Beloit, Wis.
Lary, Alleen Petitt, B. S., .....Lexington.
Lewis, Charles Dickens, B. Ped.,..... .... Berea.
Luten, Drew William, A. B.,..... .....Cayce.
Marshall, Albert Ross, B. S.,.... .....Lexington.
Milburn, Frank William, B. M. E.,..... .....Nashville, Tenn.

*Deceased.

Moore, Thomas Brent, A. B.,.....Lexington.
Offutt, Jimmie Morrison, B. S.,.....Louisville.
Pennington, William Lee, B. Ped.,.....Sandyhook.
Perkins, Wade Hampton, B. C. E., .....Nashville, Tenn.
Rankin, Flora Emma, A. B.,.....Rankin.
Richmond, Thomas Logan, B. Agr.,.....Manila, P. I.
Seibert, Frank Thomas, B. M. E., ..... Philadelphia, Pa.
Sharon, John Albertus, B. Ped.,.....Paris.
Shedd, Oliver March, B. S.,.....Lexington.
Taylor, Gibson Walker, A. B., .....Troy, Mo.
Treas, Charles, B. C. E., .....McComb City, Miss.
Webb, William Snyder, B. S.,.....Wewoka, I. T.
West, Perry, B. M. E.,.....Louisville.
Williams, Ella Campbell, B. S.,.....Chilesburg.

## 1902.

Barr, Thomas James, B. M. E., .....Clay City.
Berry, Jesse Cecil, B. Ped., .....Clintonville.
Boulware, Lemuel Ford, A. B., .....Campbellsburg.
Bowling, Willette Lee, B. M. E.,.....New York.
Campbell, Walter Gilbert, A. B.,.....Lexington.
Clay, Mathew Martin, B. C. E.,.....Lexington.
Cox, Spencer Foster, B. M. E., .....Philadelphia, Pa.
Crider, Albert Foster, A. B., .....Marion.
Ditto, Leola, B. Ped.,.....Pleasureville.
Donan, Daniel Cummins, B. Ped.,.....Hardyville.
Doyle, Chester Lawrence, B. M. E.,.....Chicago, Ill.
Dunn, Oswald Thorp, B. C. E.,.....New Orleans, La.
Evans, Edwin Clinton, B. M. E., .....London, Eng.
Ewell, George Watkins, A. B.,..... Columbus, O.
Frazee, George Burbridge, B. M. E.,.....Steven's Point, Wis.
Gaither, Morton Williams, B. M. E.,.....Harrodsburg.
Grady, Clyde, A. B.,..... Smiths Mills.
Hart, William Frederick, B. C. E.,.....St. Louis, Mo.
Hatfield, Ulysses Grant, B. Ped.,.....Jabez.
Haynes, Robert, B. Ped.....Robards.
Hoeing, Howard Aubrey, B. M. E.,.....Cincinnati, Ohio.
Hoeing, Wallace, B. M. E., .....Louisville.
Hughes, William Neal, B. C. E., .....Louisville.
Humphrey, Hubert Lee, B. M. E.,..... .....Cleveland, Ohio.
Jackson, John Hunt, B. Ped., .....New Columbus.
Jett, Charles Mills, B. M. E.,..... ...Alleghany, Pa.
Jones, Theodore Tolman, A. B., A. M. '03 ... .....Lexington.
Kehoe, John Hickey, B. M. E., .....Cynthiana.
Lawhorn, Jesse Sherman, B. Ped., .....Paris.
Lyne, William, B. M. E., .....Chicago, Ill.

Maddox, David Campbell, A. B., ..... Hickman.
Martin, Lewis Wynne, B. M. E., ..... St. Charles, Mo.
Mason, Glenn Frank, B. S., ..... Pittsburg, Pa.
McDonald, Samuel Gilbert, B. Agr., ..... Chicago, Ill.
Moorman, Robert Emmett, B. C. E., ..... Phoenixviile, Pa.
Pulverman, William Edward, B. M. E., ..... Philadelphia, Pa.
Smith, Chester Martin, B. M. E., ..... Buffalo, N. Y.
Smith, Orville Francis, B. C. E., ..... Phoenixville, Pa.
Stoner, John Lee, B. C. E., ..... Pikeville.
Sumner, Herman, B. M. E., ..... Chicago, Ill.
Taylor, Flemin Coffee, B. M. E., ..... Chicago, Ill.
Taylor, Lewis Nelson, B. S., ..... Science Hill.
Threlkeld, Lal Duncan, A. B., ..... Salem.
Upington, George Rout, B. M. E., ..... Philadelphia, Pa.
Warnock, Thomas Edwin, B. M. E., ..... Chicago, Ill.
Williams, Cora, B. Ped., ..... Bellevue.
Wilson, Richard Napoleon, B. M. E., ..... Dayton, Ohio.

1903.

Austin, Mary Wickliffe, A. B., ..... Paris.
Barkley, George LaRue, B. M. E., ..... Springfield, Ill.
Bradley, Homer Theodore, B. M. E., ..... Falmouth.
Brown, John Edwin, B. Agr., ..... Shelbyville.
Bullock, Barry, A. B., ..... Lexington.
Chorn, Sarah Marshall, A. B., ..... Lexington.
Cutler, Thomas Henry, B. M. E., ..... Springfield, Ill.
Ellis, Richard Washington, B. M. E., ..... Boston, Mass.
Elvove, Elias, B. S., ..... Lexington.
Evans, Frederick Huston, B M. E., ..... Ironton, Ohio.
Finneran, James Cornelius, B. M. E., ..... Beloit, Wis.
Finneran, Thomas Francis, B. C. E., ..... Midway.
Gaither, Edward Basil, B. M. E., ..... Mexico.
Galloway, Clarence Albert, A. B., ..... Owenton.
Hamilton, Lloyd Logan, B. M. E., ..... Chicago, Ill.
Hancock, Mason Wallace, A. B., ..... Columbia.
Heaton, Herman Creel, B. M. E., ..... Cincinnati, Ohio.
Higgins, Lucy Joseph, A. B., ..... Louisville.
Hutchings, John Bacon, B. C. E., ..... Louisville.
Kelly, Edward Owen Guerrant, B. S., ..... Lexington.
Lancaster, John Ralph, B. M. E., ..... Cleveland, Ohio.
Lyle, Cornelius Railey, B. M. E., ..... New York.
Marks, William Mathews, B. M. E., ..... Versailles.
Marshall, Isabella West, A. B., ..... Lexington.
McKee, Neal Trimble, B. M. E., ..... Cleveland, Ohio.
McLaughlin, Marguerite, A. B., ..... Lexington.
Miller, Mina Garrard, B. S., ..... Elkton.
Nave, Miriam Wynter, B. S., ..... Lexington.

Norvell, Lucy Hargis, A. B.,.....Carlisle.
Peckinpaugh, Charles Leon, B. C. E.....Louisville.
Pence, Alice Courtney, B. S.,.....Lexington.
Perrine, Charles Duke, B. M. E., .....Maysville.
Rand, Edward, B. M E., ... .... ..... .....Beloit, Wis.
Render, Fannie, A. B.,..... ..... ... Hartford.
Rice, Guy Wickliffe, B. C. E., ..... .....Lexington.
Sadler, Reuben Batson, B. S.,.....Wilmore.
Shannon, Bernardette, A. B., ... .....Lexington.
Spencer, Howell Mason, B. M. E., .....San Francisco, Cal.
Sprake, Eleanor Hedges, A. B.,.....Paris.
Tandy, Clarke Howell, A. B.,.....Hopkinsville.
Thomas, Smith Riley, B. M. E., ..... .....Beloit, Wis.
Thompson, John James, B. M. E., .....Cincinnati, Ohio.
Vogt, John Henry Leon, B. M. E., ..... .....Indianapolis, Ind.
Whitfield, Nellie Herbert, B. S., .....Lexington.
Whittinghill, Jackson Pate, B. S., .....Glendeane.
Whittinghill, Roscoe Timoleon, B. Ped., .....Clarksville, Tenn.
Wurtele, Edward Conrad, A. B., .....Louisville.

# MILITARY DEPARTMENT.

## ROSTER.

CAPTAIN GEORGE L. BYROADE, U. S. A.,

*Commandant.*

### CADET BATTALION.

*Staff.*

G. H. GILBERT, First Lieut. and Adjt.
W. H. SCHOENE, First Lieut. and Q. M.
J. W. LANCASTER, Sec. Lieut. and Com.
J. F. SHIPP, Sergt. Maj.
H. M. WEST, Q. M. Sergt.
H. WOOSLEY, Color Sergt.
W. E. THOMPSON, Hosp. Steward.
J. M. MATHEWS, Princ. Musician.
C. A. SMITH, Chief Musician.
T. P. PINKERTON, Drum Major.

### INFANTRY.

| A COMPANY. | B COMPANY. | C COMPANY. | D COMPANY. | E COMPANY. |
|---|---|---|---|---|
| CAPTAIN. | CAPTAIN. | CAPTAIN. | CAPTAIN. | CAPTAIN. |
| F. Johnston. | W. C. Kelly. | W. H. Grady. | C. R. Wallis. | R. R. Taliaferro. |
| FIRST LIEUT. | FIRST LIEUT. | FIRST LIEUT. | FIRST LIEUT. | FIRST LIEUT. |
| H. G. Edwards. | A. Akin. | H. B. Darling. | V. D. Roberts. | G. C. Goodloe. |
| SEC. LIEUT. | SEC. LIEUT. | SEC. LIEUT, | SEC. LIEUT. | SEC. LIEUT. |
| H. N. Wood. | E. B. Stiles. | H. P. Ingels. | G. W. Vaughn. | J. P. Maddox. |
| SERGEANTS. | SERGEANTS. | SERGEANTS. | SERGEANTS. | SERGEANTS. |
| J. M. Coons. | H.L.Williamson, | C. B. Owens, | E. A. Cline. | P. O'Neill. |
| E. P. Kelly. | A. H. Rodes. | O. McDowell. | B. Thomas. | W. T. Downing. |
| J. H. McHargue. | J. W. Guyn, | H. W. Tomlinson. | C. P. Lancaster. | J. C. Newman. |
| C. R. Wright. | H. E. Reed. | J. B. Sprake. | R. P. Duvalle. | E. Webb. |
| E. L. Baird. | M. W. Powell. | R. Wiley. | W. H. Durham. | E. D. Scott. |
| D. C. Kinkead. | R. C. Terrell. | C. J. McPherson. | C. W. Ham. | H. S. Scott. |
| CORPORALS. | CORPORALS. | CORPORALS. | CORPORALS. | CORPORALS. |
| H. B. Pope. | A. S. Karsner. | J. R. Nunnelley. | C. C. Hedges. | A. D. Murrell. |
| F. C. Mahan. | A. L. Donan, | H. C. Robinson. | J. H. Letton. | H. L. Prather. |
| J. C. Beatty. | J. M. Sprague. | P. Atkins. | C. W. Haynes. | P. Bogard. |
| W. P. Kemper. | A. N. Whitlock. | H. Wilson. | J. Webb. | F. M. Stone. |
| F. R. Sellman. | C. B. Mathis. | E. L. Reese. | G. D. Howard. | S. C. Jones. |
| C.G.Montgomery | L. J. Pryse, | C. H. Sutherland. | J. W. Lancaster. | P. D. Chapman. |

### ARTILLERY.

| CAPTAIN. | SERGEANTS. | CORPORALS. |
|---|---|---|
| J. B. Trice. | K. P. Adamson. | W. B. Sherrill. |
| FIRST LIEUT. | J. C. Nesbit. | H. E. Thrasher. |
| H. F. Scholtz. | W. M. Smith. | W. R. Wallace. |

### SIGNAL CORPS.

| SERGEANT. | CORPORAL. |
|---|---|
| J. R. McChord, | D. R. Hays. |

### BOYS' CORPS.

CORPORALS.
L. C. Brown.
E. P. Kelly.
G. P. Edwards.

### BAND.

| CAPTAIN. | SERGEANTS, | CORPORALS. | PRIVATES. | |
|---|---|---|---|---|
| G.C.Montgomery | W. S. Weaver. | J. H. Clo. | I. H. Lawson. | W. L. O'Neill. |
| H. L. Amoss. | E. C. Fain. | J. S. Curtis. | J. V. Morris. | H. G. Smith, |
| J. Becker. | R. L. Crenshaw. | F. F. Vaughn, | J. H. Muir. | F. H. Tucker. |

## POST-GRADUATES.

Austin, Mary Wickliffe.....Classical .....Paris.
Blessing, George Frederick.....Mech. Eng.....Reno, Nev.
Bullock, Samuel Archibald.....Mech. Eng.....New York.
Chorn, Sarah Marshall.....Classical .....Lexington.
Dunn, Oswald Thorp.....Civ. Eng.....New Orleans.
Elvove, Elias.....Scientific .....Lexington.
Kelly, Edward O. Guerrant.....Scientific .....Troy
Musselman, Joseph Franklin.....Mech. Eng.....Louisville.
Nave, Miriam Wynter.....Scientific .....Lexington.
Pence, Alice Courtney .....Scientific .....Lexington.
Scholtz, Theodore Walter .....Mech. Eng .....Wilkinsburg, Pa.
Taylor, Lewis Nelson .....Classical .....Science Hill.
West, Perry .....Mech. Eng .....New York.
Whitfield, Nellie Herbert .....Scientific .....Lexington.

## UNDERGRADUATES.

### SENIORS.

Andrus, Leander Elwood.....Classical .....Mayfield.
Arnett, Richard Hood.....Normal .....Troy.
Austin, Lilian .....Classical .....Paris.
Barclay, Robert Hargrove.....Min. Eng.....Louisville.
Bell, Howard Kerfoot, B. S., .....Civ. Eng.....Midway.
Buford, Nancy Bell .....Classical .....New Castle.
Butner, Robert Clarke .....Mech. Eng.....Lexington.
Clo, J. Harry .....Scientific ..... Science Hill.
Coleman, Harry Raymond .....Normal ..... Latonia.
Crutchfield, William Boulden.....Classical ..... Lexington.
Denny, Samuel Alfred .....Scientific .....Madisonville.
Dodson, Marcus Alvin .....Normal .....Monticello.
Dowling, Edward Thomas .....Mech. Eng.....Lexington.
Doyle, Martin Augustus .....Mech. Eng.....Paris.
Dyer, Orville Kirk.....Mech. Eng. .....DeKoven.
Eubank, Walter Pendleton .....Civ. Eng.....Glasgow.
Freeman, William Edwin .....Mech. Eng..... Lexington.
Fry, Henry Skillman .....Mech. Eng.....Lexington.
Gardener, James Henry .....Scientific .....Sonora.
Gary, William Edward .....Scientific .....Pembroke.
Gilliland, Eugene .....Mech. Eng.....Chenault.
Gilmore, Charles Robert .....Scientific .....Valley Oak.
Gordon, Amos Alvin.....Civ. Eng.....Owensboro.
Grey, William David.....Civ. Eng. .....Louisville.
Gullion, Carroll Hanks .....Mech. Eng.....New Castle.
Harding, George Othniel.....Civ. Eng.....Campbellsville.
Hart, Benjamin Robert.....Scientific .....Pisgah.
Hart, Margaret Rebecca .....Classical .....Pisgah.

Hedges, Fleming Dillard.....Classical .....Walton.
Hoagland, Roy Chan.....Scientific .....New Castle.
House, Beverly Pryor.....Classical .....Manchester.
Howard, Styles Trenton .....Mech. Eng.....Rockvale.
Hunter, Patrick Owen .....Mech. Eng... .... Glendeane.
Jaeger, Helen Louise.....Classical ..... .....Lexington.
Jenkins, Alexander Lewis .....Mech. Eng. .... .. Bloomfield.
Johnson, Frank Yarbrough..... Mech. Eng.....Atlanta, Ga.
Johnston, Hampton Wallace .....Mech. Eng.....Lebanon.
Kelly, Walter Pearson ..... .....Scientific .....Hickory Flat.
Lewis, Joseph Graham ..... ..... Civ. Eng.....Oakland.
Madara, Helen Glenn ..... .....Classical .....Lexington.
Maguire, Mary Josephine .... .....Scientific ..... ...Lexington.
Matlack, Charles Aloysius.....Mech. Eng .....Lexington.
Matthews, John Eve ..... ..... Mech. Eng .....Barbourville.
McCann, Sue Dobyns.....Scientific .....Lexington
McCauley, James Simeon.....Mech. Eng .....Versailles.
McCaw, Eloise Chesley Hance.....Scientific .....Pisgah,
Monson, Bessie Lee.....Normal .....Shady Nook.
Montgomery, Francis Joseph .....Classical .....Lexington.
Nollau, Louis Edward.. ..... Mech. Eng .....Louisville.
Payne, William Campbell .....Scientific .....Lexington.
Peratt, Charles Oscar.....Classical .....Hilltop.
Pickels, George Wellington ..... .....Civ. Eng .....Richmond.
Porch, Madison B..... .....Scientific .....Somerset
Puckett, Honer ... .....Civ. Eng .....Tonieville.
Ramey, Emerson Everett.. .....Mech. Eng ..... Carlisle.
Reese, Robert Rufus Harcourt.....Civ. Eng.....Cynthiana
Renz, Gertrude ..... .....Scientific .....Louisville.
Rice, Heber Holbrook ..... .....Scientific .....Paintsville.
Sandefur, James Franklin .....Classical .....Henderson.
Schneiter, Frederic Lewis ..... ..... Civ. Eng ..... ..... Louisville.
Schultz, Elmer Wilkerson ..... .....Classical .....Lexington.
Shelby, John Craig..... .....Classical ..... .....Lexington.
Shobe, William Merritt .....Agriculture ..... . Oakland.
Smedley, Sarah Cleveland.....Classical .....Fort Spring.
Smith, Claude Robert.....Scientific ..... ....Elizabethtown.
Smith, Thomas Marshall ..... Scientific .....Hooktown.
Stackhouse, Clifton Carr ..... ..Mech. Eng .....Lexington.
St. John, Claire Porter .....Mech. Eng ..... Brooklyn, N. Y.
Thurman, Zella Mae .....Scientific .....Somerset.
Tucker, Nannie Susan..... Classical .....Washington.
Vaughn, Earl Cleveland.....Classical .... .....Smithville.
Walsh, Robert Bright.. .....Classical .....Boyd.
Warder, William Henry.....Civ. Eng .....Glasgow.
Ware, Cornelius .....Normal .....Pulaski.

Wilkie, Margaret Donald Erskine.....Scientific.....Lexington.
Wilson, George Hancock.....Scientific .....Lexington.
Wurtele, Henry Joseph..... .....Civ. Eng.. .....Louisville.

JUNIORS.

Adamson, Keith Frazee ..... .....Mech. Eng..... Maysville.
Akin, Allison.....Mech. Eng.....Princeton.
Amoss, Harold Lindsay .....Scientific .....Paducah.
Bain, Marie Laura .....Clasaical .....Lexington.
Baird, Elza Leet .....Civ. Eng.....Glenville.
Baumgarten, Louis Erwin .....Mech. Eng.....Louisville.
Beatty, John Charles.....Mech. Eng.....Muir.
Best, Charles Lewis.. .... ..... .....Mech. Eng.....Maysville.
Bickel, Charles Alfred..... .....Mech. Eng.....Louisville.
Brashear, Sue Ashbrook.....Classical .....Cynthiana.
Bryan, Daniel Boone.....Mech. Eng.....Lexington.
Bryan, Ruth Mitchell.....Classical .....Lexington.
Buck, Lucien Allen .....Mech. Eng..... Paris.
Campbell, Marion..... .....Scientific .....Louisville.
Cartwright, Coleman Clyde.....Civ. Eng..... .....Louisville.
Clark, Clifford Friend .....Classical .....Lexington.
Cline, Edgar Allen..... .....Mech. Eng. .....Lee's Summit, Mo.
Coons, Joseph Morrison .....Civ. Eng.....Mt. Sterling.
Craven, John Thomas.....Civ. Eng.....New Castle.
Cremin, Edna Truetta ..... .....Classical .....Louisville.
Darling, Henry Bosworth.....Mech. Eng. .....Carrollton.
Darnall, Frank Kendrick.....Mech. Eng.....Helena.
Davis, Margaret Skillman .....Classical .....Lexington.
Dietrich, Karl Lander ..... .....Mech. Eng.....Hopkinsville.
Dodd, Minnie Lee ..... .....Scientific .....Louisville.
Drake, Jimmie..... ..... ...Classical .....Lexington.
Durham, William Humphrey .....Normal .....Humphrey.
Duvalle, Rankin Powers .....Mech. Eng.....Stamping Ground.
Edwards, Harry Griswill .....Mech. Eng.....Louisville.
Freeman, Thomas Willmott.....Mech. Eng.....Lexington.
Geary, Robert Aloysius..... .....Civ. Eng..... Lexington.
Gfroerer, Fannye Rosalie..... .....Scientific ..... Louisville.
Gilbert, George Hubbard..... .....Mech. Eng..... Lawrenceburg.
Goodloe, Green Clay..... .... . .....Mech. Eng..... ...Lexington.
Grady, William Henry.....Mech. Eng.....Trenton.
Ham, Clarence Walter .... .....Mech. Eng.....Carlisle.
Haynes, Chastain Wilson .....Scientific .....Marion.
Herndon, Leonard George.....Classical . ..... Louisville.
Ingels, Howard Payne .....Mech. Eng .....Lexington.
Johnston, Fayette..... .....Mech. Eng .....Lexington.
Kelly, William Cobb.....Civ. Eng .....Fulton.

| | | |
|---|---|---|
| Kroell, Oscar Robert | Min. Eng | Cincinnati, O. |
| Lancaster, Charles Prentice | Civ. Eng | Paris. |
| Lancaster, Joseph Woolfolk | Civ. Eng | Lexington. |
| Layson, William George | Mech Eng | Millersburg. |
| Madara, John Glenn | Civ. Eng | Lexington. |
| Maddox, James Preston | Agriculture | Hickman. |
| McCauliffe, Winnie Cannon | Scientific | Lexington. |
| McKee, Walter Reid | Mech. Eng | Mt. Sterling. |
| Megee, Hilton Haynes | Mech. Eng | Lexington. |
| Moore, John Edgar Littleton | Scientific | Lewisport. |
| Morris, Stewart Minor | Mech. Eng | Lexington. |
| Murrell, Artemus Delig | Mech. Eng | Merrimac. |
| O'Neill, Frank | Mech. Eng | Paris. |
| Owens, Charles Beland | Mech. Eng | Germantown. |
| Pierce, Claude Stone | Classical | Pulaski. |
| Pinkerton, Thomas Pearce | Classical | Versailles. |
| Pope, Henry Brooks | Min. Eng | Louisville. |
| Powell, Max West | Mech. Eng | Hickman. |
| Prather, Harry Logan | Mech. Eng | State Line. |
| Prewitt, Wilmot Kenney | Mech. Eng | Mt. Sterling. |
| Ransom, Edward Rogers | Agriculture | Blandville. |
| Rice, Earl Scott | Mech Eng | Lexington. |
| Roberts, Virgil Dickey | Mech Eng | Westview. |
| Rogers. Anna Gist | Classical | Lexington. |
| Schoene, William Jay | Agriculture | Henderson. |
| Scholtz, Herman Frederick | Civ. Eng | Louisville. |
| Shaw, Bessie | Classical | Versailles. |
| Shipp, Joel Fithian | Mech. Eng | Paris. |
| Simkins, Curtis Lester | Civ. Eng | Allegan, Mich. |
| Smiley, Proctor Knott | Mech. Eng | Catlettsburg. |
| Spencer, Bruce Nelson | Civ. Eng | Pine Grove. |
| Sprake, James Breckinridge | Mech. Eng | Stamping Ground. |
| Stiles, Elijah V. Bland | Civ. Eng | Hodgenville. |
| Taylor, Sallie | Classical | Hartford. |
| Thomas, Bennett | Mech. Eng | Paris. |
| Tomlinson, Hugh Joseph | Mech. Eng | Bryantsville |
| Trice, John Buckner | Mech. Eng | Hopkinsville. |
| Urmston, Henry Howard | Mech. Eng | Cynthiana. |
| Vaughn, George William | Classical | Lexington. |
| Wallis, Charles Rees | Mech. Eng | McKinney. |
| Wathen, Sallyneill | Scientific | Louisville. |
| Weaver, Walter Simeon | Agriculture | Bronston. |
| Webb, Elzie | Civ. Eng | Toms. |
| Wemess, Enga Marie | Scientific | Louisville. |
| West, Howard Murphy | Mech. Eng | Nicholasville. |
| Woerner, Emma Josephine | Scientific | Louisville. |

Wood, Hugh Nelson .....Civ. Eng.....Hopkinsville.
Woosley, Herman.....Agriculture .....Fairview.
Wright, Charles Roy.....Civ. Eng.....Stanford.
*Young, Roscoe Conkling..... .....Agriculture .....Cherokee.

SOPHOMORES.

Allen, David Hugh .....Mech. Eng.....Edna, Texas.
Allison, Warren Barclay, A. B.....Civ. Eng.....Jeffersonville, Ind.
Almy, Samuel Willett.....Mech. Eng.....Altamont.
Arrowsmith, Oliver Stockwell .....Mech. Eng..... Bethel.
Atkins, Presley Thornton .... ..... .Classical .....Lexington.
Barrow, David Woolfolk ..... Scientific .....Lexington.
Becker, Theodore Henry .....Mech. Eng.....Louisville.
Bogard, Frank.....Mech. Eng..... ..Sebastopol, Cal.
Bowen, Thomas S..... ..... Civ. Eng..... Frankfort.
Brown, Llewellyn Chauncey .....Mech. Eng.....Harrodsburg.
Carse, Robert Allen.....Mech. Eng.....Richmond.
Clarke, Sarah Gregory ..... .....Classical . .....Lexington.
Clarkson, Charles James.....Mech. Eng.....Lexington.
Clo, Nelson Lewis .....Mech. Eng... .....Science Hill.
Coffee, Frank Mathew .....Classical ..... ...Sidney, Aust.
Conn, Grace Frank .. .....Scientific ..... ...Lexington.
Darnaby, Kate Berry..... ....Classical ..... .Lexington.
Daugherty, Garrard..... .....Scientific .....Paris.
Davis, James Withers..... Civ. Eng..... ..... Paris..
Downing, William Franklin .....Mech. Eng.....Lexington.
Dragoo, Robert Estill.....Mech. Eng. . .....Lexington.
Edmonds, George Peck.....Mech. Eng.....Lebanon.
Elam, Shelby Smith ..... .....Normal .....Elam.
Embry, William Douglas.....Agriculture .....Paris.
Fish, Clarence Beauchamp .....Normal .....Lexington.
Gaither, Isaac Hutchison.....Mech. Eng .....Harrodsburg.
Greife, Henry Wilson.....Classical.....Dayton.
Guyn, Joel White..... .....Civ. Eng ..... .... ..Lexington.
Hamilton, James Clay ..... .....Mech. Eng .....Uniontown.
Hardin, Samuel Johnston..... .....Classical.....Loudon.
Hare, Sharkey Sharp.....Civ. Eng .....Lexington.
Hedges, Charles Cleveland.....Scientific ..... .....Walton.
Hibler, Edna Parker ..... .....Classical .....Paris.
Hopgood, Roy Caldwell .....Mech. Eng .....Morganfield.
Hopson, Katharine Temple . .. .....Classical... ..... .....Lexington.
Hubbard, Isaac Madison ..... .Agriculture .....Waco.
Hughes, Blair ..... ....Civ. Eng ..... .. ..Birmingham, Ala.
Hughes, Thruston ..... ..... Civ. Eng .....Louisville.
Hutchcraft, Lucy Keller ..... ....Classical..... .....Lexington.

*Deceased.

| | | |
|---|---|---|
| Jones, Sadocie Connellee | Agriculture | Porter. |
| Kehoe, Pennell Bramblette | Mech. Eng | Lexington. |
| Kelly, Edward Patrick | Classical | Hawesville. |
| Kelly, Richard Henry | Mech. Eng | Fulton. |
| Kemper, Priest | Civ. Eng | Millersburg. |
| Kendrick, May Clare | Classical | Monticello. |
| Kinkead, Davis Carneal | Mech. Eng | Lexington. |
| Lancaster, John Wilbur | Normal | Josephine. |
| Letton, James Harvey, Jr. | Mech. Eng | Paris. |
| Lewis, Alexander Thornton | Mech. Eng | Frankfort. |
| Lilly, John Appleton | Mech. Eng | Lexington. |
| Logan, William Fox | Scientific | Lancaster. |
| Magee, Robert Earl | Mech. Eng | Cynthiana. |
| Mahan, Fred Coit | Mech. Eng | Hyattsville. |
| Mahoney, Elizabeth Margaret | Scientific | Bedford. |
| McCaw, William Robert | Civ. Eng | Versailles. |
| McChord, John | Civ. Eng | Lebanon. |
| McClelland, Byron | Scientific | Lexington. |
| McDowell, Omar | Mech. Eng | Mt. Olivet. |
| McHargue, James Spencer | Scientific | Boreing. |
| McPherson, Charles Jarrett | Mech. Eng | Hopkinsville. |
| McVey, Everett Clyde | Civ. Eng | Perkins. |
| Milligan, George Stanley | Mech. Eng | Lexington. |
| Montgomery, Charles Garnwell | Min. Eng | Straight Creek. |
| Montgomery, George Carter | Mech. Eng | Liberty. |
| Newman, James Cleveland | Mech. Eng | Lexington. |
| Nesbet, James Clarence, Jr., | Civ. Eng | Madisonville. |
| Moore, Gus Henry | Mech. Eng | Hopkinsville. |
| Moore, Henry Ray | Mech. Eng | Hubers. |
| Morris, John Vernon | Mech. Eng | Hodgenville. |
| Nunnelley, Eva | Classical | Lexington. |
| Nunnelley, James Robert | Mech. Eng | Lexington. |
| Ogg, Grace | Classical | Mt. Sterling. |
| Parrigin, Frank | Civ. Eng | Albany. |
| Phipps, Gertrude Lena | Classical | Lexington. |
| Powell, Park | Classical | Hickman. |
| Pride, Louis Bailey | Mech. Eng | Bordley. |
| *Pryse, Llewellyn Jones | Civ. Eng | Beattyville. |
| Raukin, French Wader | Mech. Eng | Cynthiana. |
| Ratliff, Alvin Burns | Mech. Eng | Bethel. |
| Read, Henry English | Mech. Eng | Hodgenville. |
| Rice, Edgar Poe | Normal | Paintsville. |
| Robinson, Herman Clayton | Mech. Eng | Stamping Ground. |
| Rodes, Allen Higgins | Scientific | Lexington. |
| Scott, Ethelbert Dudley | Mech. Eng | Bement, Ill. |

*Deceased.

| | | |
|---|---|---|
| Scott, Henry Skillman | Mech. Eng. | Bement, Ill. |
| Scott, Mary | Classical | Richmond. |
| Scrugham, Mary. | Classical | Lexington. |
| Sellman, Frank Raymond | Mech. Eng. | Nicholasville. |
| Shaw, Joseph Stephens | Min. Eng. | Winchester. |
| Sherrill, Buford Wilson | Scientific | Kniffley. |
| Smith, Lowry | Civ. Eng. | Paducah. |
| Smith, Maxwell Waide | Civ. Eng. | Hot Springs, Ark. |
| South, Weldon H | Civ. Eng. | Frankfort. |
| Stevens, Harold Edwin | Agriculture | Prewett. |
| Stone, Francis Marion | Mech. Eng. | Flemingsburg. |
| Sutherland, Clay Hutchcraft | Mech. Eng. | Paris. |
| Taliaferro, Robert Ryland | Mech. Eng. | Pearo, Va. |
| Taylor, Hugh Wilbur | Agriculture | Lewisport. |
| Taylor, James Julian | Mech. Eng. | Georgetown. |
| Terrell, Robert Craig | Civ. Eng. | Bedford. |
| Thomson, William Edgar | Scientific | Frost. |
| Tucker, Frederick Harrig | Scientific | Madisonville. |
| Waide, Daniel Frederick | Scientific | Nicholasville. |
| Wallace, William Rankin | Agriculture | Pleasant Home. |
| Wallis, Anna | Scientific | Lexington. |
| Wallis, Elizabeth Ward | Scientific | Lexington. |
| Ward, Richard Earl | Mech. Eng. | Lancaster. |
| Warner, Lizzie | Classical | Nicholasville. |
| Webb, John | Mech. Eng. | Greendale. |
| Wells, Kendrick | Normal | Paintsville. |
| Whitlock, Albert Newton | Classical | Richmond. |
| Wiley, Rodman | Civ. Eng. | White Sulphur. |
| Wilken, George B., | Min. Eng | Crescent Hill. |
| Wilkie, Florence | Classical | Lexington. |
| Williamson, Harold Louis | Classical | Lexington. |
| Williamson, Hugh | Mech. Eng | Lexington. |
| Wilson, Horace Hildebrand | Mech. Eng | Lexington. |

### FRESHMEN.

| | | |
|---|---|---|
| Acker, Robert | Civ. Eng | Paducah. |
| Allen, John Griffin | Civ. Eng | Owensboro. |
| Ammerman, Edward Clifton | Mech. Eng | Cynthiana. |
| Ammerman, John Roger | Mech. Eng | Cynthiana. |
| Archdeacon, Joseph John | Mech. Eng | Mayslick. |
| Arnspiger, Rodes Allen | Scientific | Lexington. |
| Barnard, Roscoe Luther | Mech. Eng | McHenry. |
| Battaile, James Frank | Mech. Eng | Lexington. |
| Blythe, Virginia | Scientific | Burlington. |
| Boggess, Louis Sterling | Civ. Eng | Lawrenceburg. |
| Booth, Harry Gilbert | Mech. Eng | Lawrenceburg. |

| | | |
|---|---|---|
| Branson, Dom Pedro | Scientific | Dye. |
| Brown, Katherine Clark | Classical | Lexington. |
| Buchannan, Allie Stout | Mech. Eng | Paynes Depot. |
| Callahan, Chester Douglas | Mech. Eng | Danleytown. |
| Carney, Edward Donald | Mech. Eng | Hopkinsville. |
| Cassell, George Rose | Civ. Eng | Lexington. |
| Chapman, Frank Dalton | Mech. Eng | Louisville. |
| Crafton, Milton Cooksey | Civ. Eng | Henderson. |
| Craig, Berrywick Staley | Mech. Eng | Versailles. |
| Cram, Ambrose Byrd | Civ Eng | Morgan. |
| Crume, James Marks | Mech. Eng | Lebanon. |
| Davidson, Charles Arthur | Mech. Eng | Louisville. |
| Denham, Ernest Myers | Civ. Eng | Williamsburg. |
| Dodd, Janiel Jackson | Civ. Eng | Lexington. |
| Dodson, Walter Cleveland | Normal | Monticello. |
| Donan, Arthur Liston | Civ. Eng | Three Springs. |
| Dowden, William Pugh | Mech. Eng | Oklahoma. |
| Dowling, Herbert Patrick | Mech. Eng | Lexington. |
| Downing, Nathaniel Armstead | Mech. Eng | Lexington. |
| Duvall, Thomas Gay | Mech. Eng | Lexington. |
| Edgar, Graham | Classical | Paris. |
| English John William | Agriculture | Tonieville. |
| Epperson, Thomas Haslam | Mech. Eng | Nashville, Tenn. |
| Estill, David Chenault | Mech. Eng | Lexington. |
| Eversole, Harry C | Classical | Hazard. |
| Farrell, Walter Augustus | Mech. Eng | Dayton. |
| Forbes, James | Mech. Eng | Hopkinsville. |
| Frye, James Prentice | Mech. Eng | Hustonville. |
| Geary, Thomas Charles | Mech. Eng | Lexington. |
| Gilbert, Susie Willis | Classical | Marion. |
| Giltner, Frank Philip | Civ. Eng | Carrollton. |
| Goggin, Bessie Engleman | Normal | Somerset. |
| Goodwin, William Ingram | Civ. Eng | Lexington. |
| Gordon, Flora McPheeters | Classical | Lexington. |
| Grimes, Ernest Edmund | Mech. Eng | Lexington. |
| Grunwell, Paul Clifton | Civ. Eng | Centerville. |
| Hamilton, William Shacklette | Classical | Brandenburg. |
| Hannah, Harry Conclave | Mech. Eng | Lexington. |
| Hardin, Guy Aud | Mech. Eng | Brandenburg. |
| Hart, Robert Singleton | Classical | Pisgah. |
| Hays, David Crandall | Agriculture | Bloomfield. |
| Herman, Joseph George | Mech. Eng | Newport. |
| Hillenmeyer, Louis Edward | Agriculture | Lexington. |
| Horton, Harry Curtis | Classical | Paris. |
| Howard, Guyle Benton | Mech. Eng | Rockvale. |
| Humphrey, Robert Andrew | Mech. Eng | Lexington. |

Hutchings, Eusebius Theodore .....Civ. Eng .....Louisville.
Johnston, Ellis Murray..... .....Mech. Eng .....Lebanon.
Karsner, Albert Sharkey .....Civ. Eng .....Lexington.
Kinkead, Davis Carneal.....Mech. Eng .....Lexington.
Kinkead, Edmund Shelby.....Mech. Eng .....Lexington.
Kinnear, William Kenneth.....Mech. Eng .....Lexington.
Kirby, Augustus Monice .....Classical.....Butler.
Lee, Stanley Frazee.....Mech. Eng ..... ..Ironton, O.
Lewis, Leo Logan.....Mech. Eng .....Lexington.
Lucas, Fannie DeLong.....Classical.....Lexington.
Maddocks, Florence May ..... ...Scientific .....Carrollton.
Mathis, Charles Brothers .....Mech. Eng .....Lexington.
McCauley, Worth Orene..... .....Mech. Eng .....Versailles.
McFerran, Warren Viley .....Mech. Eng .....Versailles.
McKinney, Walter..... .....Mech. Eng .....Mt. Salem.
Menifee, John Newell.....Mech. Eng .....Stanford.
Moore, Vernon Madison.....Mech. Eng .....Lexington.
Muir, J. Harry..... Mech. Eng..... ..Paris.
Nicholls, Hal Miller . .....Classical .....Bloomfield.
Nicholls, William Durrett.....Classical ..... . Bloomfield.
Oldham, Eula .....Normal .....Lexington.
Ott, Thomas Foreman .....Scientific .....Lexington.
Parrish, Swift ..... .....Classical .....Lexington.
Piper, Mary Hammond.....Classical .....Lexington.
Paullin, Frank Chester ..... .....Civ. Eng.....Springfield, Ill.
Penn, John Buford..... .. .....Mech. Eng.....Georgetown.
Rankin, Frederick Jones .....Mech. Eng.....Rankin.
Rees, Elijah Laytham ..... .....Civ. Eng.....Lexington.
Riefkin, Philip ..... .....Mech, Eng.....Newport.
Roark, Ruric Creegan .....Scientific .....Lexington.
Rodes, Joseph Waller, Jr.....Mech. Eng.....Lexington.
Rogers, Fanny Clark.....Classical ..... ...Lexington.
Rule, Parrin.....Mech. Eng.....Falmouth.
Saunders, Hugh Barton .....Normal .....Hickman.
Schoene, Charles Edgar..... . .....Mech. Eng.....Henderson.
Scott, Robert Dumont .....Mech. Eng.....Lexington.
Shannon, Philip Francis .....Mech. Eng. .....Lexington.
Smith, Harry Gorin .....Civ. Eng..... .Glasgow.
Smith, Newton Frank .....Scientific .....Cynthiana.
Spears, Howell Davis .....Scientific .....Lexington.
Sprague, Joseph Miles ..... .....Mech. Eng.....Sturgis.
Steele, Arthur Winslow ..... ....Mech. Eng.....Lexington.
Stone, William Morgan .....Classical .....Bethel.
Sumner, Gordon.....Civ. Eng.....Greenville.
Taylor, Richard Moreland.....Civ. Eng.....Owensboro.
Terry, James Cad.....Mech. Eng.....Elizabethtown.

| | | |
|---|---|---|
| Thomas, John William | Mech. Eng. | Georgetown. |
| Thomasson, Francis Charles | Classical | Livermore. |
| Thompson, Harvey Worthington | Civ. Eng | Fern Leaf. |
| Thrasher, Harvey Earl | Civ. Eng | Lewisport. |
| Towery, Lonnie Todd | Classical | Marion. |
| Troutman, Henry Harned | Civ. Eng | Bardstown. |
| Vaughn, James Marion | Mech. Eng | Lexington. |
| Viley, John Rodes | Mech. Eng | Lexington. |
| Wallace, William Rankin | Classical | Lexington. |
| Wilkes, Gilbert Van Buren | Mech. Eng | Washington. |
| Williams, Herman Taylor | Mech. Eng | Shepherdsville. |
| Williamson, William Marion | Mech. Eng | Lexington. |
| Wilson, Walter Ashby | Scientific | Henderson. |
| Woods, Lila Whiteman | Classical | Maysville. |
| Woods, Joseph Bond | Mech. Eng | Lawrenceburg. |
| Woods, William Clarence, Jr | Agriculture | Lawrenceburg. |
| Woodward, William Drane | Mech. Eng | Beaver Dam. |
| Yager, John Joel | Mech. Eng | Leitchfield. |
| Young, Charles Henry | Mech. Eng | Paint Lick. |

STUDENTS NOT REGULARLY CLASSIFIED.

| | | |
|---|---|---|
| Anderson, Lee | Agriculture | Lexington. |
| McGrew, Miller Almer | Agriculture | Bayou. |
| Ricketts, Arthur Grey | Agriculture | Mt. Sterling. |
| Thrasher, Chester Irwin | Agriculture | Lewisport. |

## NORMAL STUDENTS.

FOR THE STATE DIPLOMA.

| | | |
|---|---|---|
| Bowlds, Fleming | Habit | Daviess. |
| Brewer, Boltos Eldes | Williamstown | Grant. |
| Earle, Irbie Benjamin | Charleston | Hopkins. |
| Elam, Butler Jackson | Elam | Morgan. |
| Elliott, Clarence | Humphrey | Casey. |
| Gambill, Hubert Henry | Cannel City | Morgan. |
| Gambill, Lawrence Cato | Cannel City | Morgan. |
| Howard, Henderson | Baxter | Harlan. |
| Hudson, William Edward | Godfrey | Allen. |
| Kirk, Estill | Philpot | Daviess. |
| McPherron, Robert Lee | McGuffey | Pulaski. |
| Newman, Andrew Jackson | Turner's Station | Henry. |
| Oldham, Eula | Lexington | Fayette. |
| O'Neill, William Talbott | Paris, | Bourbon. |
| Strother, Jesse Oldham | Whitesville | Daviess. |
| Tharpe, Alice Mae | Lexington | Fayette. |
| Vaughan, Frank Friel | Cannel City | Morgan. |

FOR THE STATE CERTIFICATE.

| | | |
|---|---|---|
| Allen, Alphonso Blane | Dwale | Floyd. |
| Begley, John | Alphoretta | Floyd. |
| Booth, Hallie Louise | Leavenworth | Indiana. |
| Bradley, Mary | Stamping Ground | Scott. |
| Britton, Thomas Lambert | Big Creek | Clay. |
| Brown, Ira Clay | Humphrey | Casey. |
| Bullock, Grace | Hebron | Boone. |
| Caudill, Stephen Emery | Whitesburg | Letcher. |
| Chambliss, Millie | Grayson | Falls o' Rough. |
| Chambliss, Zilpah Mayne | Grayson | Falls o' Rough. |
| Claybrooke, Annie Garland | Springfield | Washington. |
| Combest, Pauline | Phil | Casey. |
| Crabb, Mary Bell | Eminence | Henry. |
| Filbin, Addie Mae | Mt. Sterling | Montgomery. |
| Goodlett, Robert | Kirkwood | Mercer. |
| Grogan, Lucille. | Murray | Calloway. |
| Guice, Mrs. Sophia | Lexington | Fayette. |
| Hays, Mamie Gertrude | So. Park | Jefferson. |
| Hoover, Loula | Friedland | Ohio. |
| Jeffers, Mary Jane | Greenville | Muhlenburg. |
| Joplin, Ella Love | Mt. Vernon | Rockcastle. |
| Kelly, Camie | Hawesville | Hancock. |
| Kelly, Mary Louise | Owensboro | Daviess. |
| Lassiter Albert Enos | Cherry | Calloway. |
| Mann, Ezra | Mt. Olivet | Robertson. |
| McFarland, Roy Leighton | Delaware | Daviess. |
| Moore, Blanche | Lexington | Fayette. |
| Miller, Henry Taylor | Philpot | Daviess. |
| Mullikin, Joseph William | Piqua | Robertson. |
| Oakes, Henry | Beechland | Metcalfe. |
| Peffer, Susan | Frankfort | Franklin. |
| Robinson, Marion Marshall | Laurel Creek | Clay. |
| Sebastian, William Calloway | Daysboro | Wolfe. |
| Sullivan, John Berton | Corbin | Whitley. |
| Utterback, Caleb | Sharpsburg | Bath. |
| Wells, Mary Eiizabeth | Murray | Calloway. |

FOR THE COUNTY CERTIFICATE.

| | | |
|---|---|---|
| Austin, Mary Wickliffe | Paris | Bourbon. |
| Ball, Etta May | Lexington | Fayette. |
| Ballenger, Effie Furmond | Lexington | Fayette. |
| Banta, James Dudley | Bramblette | Nicholas. |
| Bennett, Clarence Samson | Narrows | Ohio. |
| Booth, Clarence Henry | Leavenworth | Indiana. |
| Boswell, Alexander | Narrows | Ohio. |
| Bush, Gholson Philip | Waco | Madison. |

| | | |
|---|---|---|
| Bush, William Tribble | Waco | Madison. |
| Bush, Mary Harding | Waco | Madison. |
| Butler, Nannie Etta | Lexington | Fayette. |
| Cawood, Frank Finley | Cawood | Harlan. |
| Charles, Laura Pauline | Lexington | Fayette. |
| Chenault, Nettie Bronston | Richmond | Madison. |
| Chorn, Sarah Marshall | Lexington | Fayette. |
| Combest, Cordelia Emma | Phil | Casey. |
| Conlee, Lewis | Stanton | Powell. |
| Donohoo, Jacob Benjamin | Sacramento | McLean. |
| Downs, Millard Mason | Downs | Greenup. |
| Eggner, Harry Hollis | Aurora | Marshall. |
| Fightmaster, Earl | Davis | Scott. |
| Gilbert, Evelyn Christine | Speedwell | Madison. |
| Gibson, Walter | Dublin | Graves. |
| Hart, Mary Emma | Cleveland | Fayette. |
| Herring, Forrest | Oakville | Logan. |
| Holton, Harry | Falmouth | Pendleton. |
| Hubbard, Martha | Waco | Madison. |
| Jackson, Eula | Speedwell | Madison. |
| Johnson, Robert Allen | Annville | Jackson. |
| Juett, Edna | Georgetown | Scott. |
| Kirk, Theodore Tilton | Philpot | Daviess. |
| Littrell, Carrie Lillian | Lexington | Fayette. |
| McFerran, John | Pine Hill | Rockcastle. |
| McKenna, Joseph Bernard | Lexington | Fayette. |
| Mathews, Mary | Port Royal | Henry. |
| Medlock, Cleve | Morton's Gap | Hopkins. |
| Mercer, John Otto | Raymond | Breckinridge. |
| Million, Jackson Egbert | Richmond | Madison. |
| Moore, Paul | Faith | McLean. |
| Payne, Anna Laura | Bewlayville | Breekinridge. |
| Peratt, William Hurst | Hilltop | Fleming. |
| Pierce, George B | Bronston | Pulaski. |
| Rader, Roy Edward | Annville | Jackson. |
| Reed, Nunnie | Gifford | Magoffin. |
| Reed Wiley Burns | Hager | Magoffin. |
| Smith, Jean Lyne | Lexington | Fayette. |
| Stephens, Oscar James | Hawesville | Hancock. |
| Strong, Florence | Athol | Breathitt. |
| Sullivan, Robert Lee | Lexington | Fayette. |
| Thompson, Alta | Mayfield | Graves. |
| Tillett, Flora Evelyn | Lexington | Fayette. |
| Trayler, Pearlie Monroe | Rufus | Caldwell. |
| Wallace, Arthur | Golden Pond | Trigg. |
| Wallace, Daniel | Irvine | Estill. |
| Whittinghill, Irene | Trisler | Ohio. |
| Williamson, Morah | Lexington | Fayette. |

## THE ACADEMY.

### SECOND YEAR STUDENTS.

Anderson, Edward Marshall.....Big Stone Gap, Va.
Ashurst, Nannie Pearl .....Lexington.
Atherton, Paul Fulton .....Nuckols.
Atkins, Davis Corbin..... Lexington.
Barbee, George Read.....Lexington.
Bean, Harry Campbell .....Lexington.
Bean, Louis Vimont .....Lexington.
Bogard, George Taylor.....Golden Pond.
Brewer, Leo ... .....Golo.
Bryant, Thompson Ripley .....Eminence.
Clay, Roby Wornall .....Lexington.
Cleaver, William Grove .....Lebanon.
Coyne, Thomas Edward.....Lexington.
Crenshaw, Robert Walden .....Cadiz.
Crowder, Margaret Lee.....Sinai.
Curtis, James Stewart .....Lexington.
Dohoney, Turner Merritt..... .....Lebanon.
Downing, Harold Hardesty.....Lexington.
Dragoo, Omie Wymen ..... .....Lexington.
Fain, Elmore Crenshaw ..... .....Lexington.
Fried, Sienna Kathryn .....Lexington.
Galloway, Clinton Robert .....Falmouth.
Givens, Thomas Karr .....Paducah.
Goode, Ernest Frankel..... .....Lexington.
Greathouse, Elsie.. .....Pinckard.
Griffing, John Carlisle .....Lexington.
Hall, Howard Henry..... ..... ..... .....Milburn.
Herring, Henry Lemuel .....Oakville.
House, Charles Bland ..... .....Manchester.
Hurst, Margaret David.....Donerail.
Hutchcraft, David Keller..... Lexington.
Jackson, Samuel Texas..... .....Clinton.
Kearney, Daniel Anthony.....Donerail.
Leaming, Thomas Corwin .. .....Lexington.
Lovelace, Roger .....Carlisle.
McCutcheon, Jesse Robert.....Beattyville.
McNamara, William Ignatius.....Lexington.
Mathers, Albert Marion .....Bardwell.
Milward, Luke Usher .....Lexington.
Minor, Xema Clistor .....Corinth.
Moore, Richard Steele .....Donerail.
Mosely, John Milton .....Calhoun.

Mosely, Madison Rawls ..... Calhoun.
Oldham, Bessie Lee ..... Nealton.
Patrick, Samuel James ..... Salyersville.
Penrod, Alphon ..... Montrose.
Poynter, Arthur Lawrence ..... Adairville.
Proctor, Bennett McCreary ..... Lexington.
Scherffius, Frederick Fanon ..... Lynnville.
Shearer, Ada Napoleon ..... Hidalgo.
Smith, Monroe Standish ..... Lexington.
Smith, William Granville ..... Muir.
Stoll, John William Moore ..... Lexington.
Tucker, Clyde ..... Lexington.
Vinton, Elmer Karl ..... Morehead.
Vories, Willard Louis ..... Monterey.
Wall, William Harrison ..... Cayce.
Wegner, Frank August ..... Lexington.
Welsh, John Wesley ..... Berea.
Wilson, Robert Clyde ..... Lexington.
Wilson, Walter Ashby ..... Henderson.

### FIRST YEAR STUDENTS.

Adams, Henry ..... Olmstead.
Atkins, Robert Ryland ..... Lexington.
Atkinson, Charles Lowe ..... Cynthiana.
Baker, Smith Gentry ..... Lexington.
Ballard, Hogan ..... Bryantsville.
Barbee, Richard Carroll ..... Lexington.
Bennett, Edgar ..... Irvington.
Bewlay, Crawford Willard ..... Lexington.
Bodkin, Jesse Thomas ..... Bardwell.
Boldrick, William Cleaver ..... Lebanon.
Bowman, Charles ..... Lexington.
Bussey, Joseph Crislip ..... Busseyville.
Cassidy, Tilton Jackson ..... Lexington.
Claycomb, Payton Rhea ..... Webster.
Coffman, Roy Cleveland ..... Calhoun.
Coons, William Lester ..... Montrose.
Creekmore, Ross Addison ..... Lexington.
Crosthwaite, John Scarce ..... Lexington.
Dickerson, Henry Clay ..... Beattyville.
Dunbar, Philetus ..... Columbia.
Elam, Arthur Matthew ..... Ashland.
Erdman, William Kenney ..... Lexington.
Evans, Walter Owsley ..... Stanford.
Fields, Melvin Green ..... Lexington.
Garvin, Cecil Clement ..... Olive Hill.

George, Mary Allan.....Lexington.
Gilchrist, George Alexander.....Lexington.
Greathouse, Joseph Felix.....Pinckard.
Greathouse, William McCoy.....Hawesville.
Greathouse, William Wesley.....Pinckard.
Hardesty, Lizzie Bell.....Muir.
Hargis, Evelyn.....Jackson.
Harp, Raymond Elliott.....Lexington.
Harris, William Robert.....Union City.
Hays, Rodney Malcomb.....South Park.
Hieronymus, James Burrows.....Monica.
Holmes, Luther.....Mt. Olivet.
Howard, Clyde.....Pilot Oak.
Hudson, Halcomb.....Lexington.
Johnson, John Elliott Cooper.....Tallega.
Kelly, Lucy Fairfax.....Lexington.
King, John Thomas.....Cadiz.
Lay, Owen Trimble.....Bayou.
Lewis, James Otis.....Sorgho.
Lyddan, Michael Henry.....Webster.
Mahoney, Frank.....Bedford.
Marsh, Stephen Allen.....Portsmouth, O.
Mastin, James Edward.....Faywood.
Merris, Bernie Dale.....Lexington.
Murphy, James Lee.....Turnersville.
Neblett, Patrick Henry.....Turner's Station.
Nunnelley, Samuel Philip.....Lexington.
Nutter, Reed.....Georgetown.
Parker, George Hudsbeth.....Lexington.
Proctor, William Ezra.....Morehead.
Roberts, Walter.....Manchester.
Robertson, Bessie Lee.....Lexington.
Savage, Roxie.....Lexington.
Seott, Charlotte Hart.....Lexington.
Shehan, Annie Laura.....Bloomfield.
Shehan, Eugene Brown.....Bloomfield.
Shemwell, Allan.....Birdsville.
Smith, Frank Rayburn.....Adairville.
Smith, Walter Edward.....Morganfield.
Stackhouse, William Owsley.....Lexington.
Veal, Guy Roscoe.....Vealsburg.
Waters, Lawrence Brown.....Middletown.
Wells, Emery.....Lexington.
White, Beverly Pryor.....Lexington.
White, Octo.....Lexington.
Willmott, Curtis Simeon.....Lexington.

# STUDENTS OF THE SUMMER SCHOOL.

## I. IN THE NORMAL SCHOOL.

| | | |
|---|---|---|
| Agee. Allie | Owenton | Owen. |
| Alexander, Bina | Slaughtersville | Webster. |
| Bowden, A. O | Dublin | Graves. |
| Biggerstaff, Margaret | Ludlow | Kenton. |
| Bierly, Davis M | Frankfort | W. Va. |
| Clifton, Adelia | Hopkinsville | Christian. |
| Cain, Mary E | Taylorsville | Spencer. |
| Cassidy, Irene M | Lexington | Fayetto. |
| Charles, Laura P | Lexington | Fayette. |
| Earle, Lula | Charleston | Hopkins. |
| Foley, Minnie | Middlesboro | Bell. |
| Fox, Olive | Dalton | Hopkins. |
| Faulkner, Hattie | Ashland | Boyd. |
| Garnett, Susie | Hopkinsville | Christian. |
| Hood, Dixie Anna | Lexington | Fayette. |
| Hudson, William E | Godfrey | Allen. |
| Irvine, Mrs. Jennie | Lexington | Fayette. |
| Jeffers, Mary Jane | Greenville | Muhlenburg. |
| King, Addie | Ford | Clark. |
| Kelly, Anna Camie | Hawesville | Hancock. |
| Kelly, Mary Louise | Owensboro | Daviess. |
| Lander, Alice | Hopkinsville | Christian. |
| Laughlin, Anna | Mt. Sterling | Montgomery. |
| Moore, C. P | Sacramento | McLean. |
| McGovern, Mary | Lexington | Fayette. |
| Mason, Mrs. I. S | Fordsville | Ohio. |
| Mason, I. S | Fordsville | Ohio. |
| McKenney, J. W | Davis | Scott. |
| McPherron, Robert Lee | Flat Rock | Pulaski. |
| Moore, Blanche | Lexington | Fayette. |
| Nichols, F. T | Woodstock | Pulaski. |
| Nunan, Emma | Springfield | Washington. |
| Owings, Annie | Lexington | Fayette. |
| Penn, Mary | Hopkinsville | Christian. |
| Petty, J. W | Fordsville | Ohio. |
| Reed, Ida | Covington | Kenton. |
| Reynolds, Araminta | Lewisport | Hancock. |
| Rouse, Lillie | Payne's Depot | Scott. |
| Scott, Eva | Monterey | Owen. |
| Scott, Beulah | Gratz | Owen. |
| Sullivan, Hattie | Williamsburg | Whitley. |
| Sullivan, Flora | Williamsburg | Whitley. |

| | | |
|---|---|---|
| Sandusky, Roberta | Lexington | Fayette. |
| Stoner, Mary | Hopkinsville | Christian. |
| Smith, T. A | Font Hill | Russell. |
| Sellars, Mrs. Evalena | Mayfield | Graves. |
| Talbott, Bessie | Cynthiana | Harrison. |
| Triplett, M. C | Stithton | Hardin. |
| Tanner, A. S | Pleasant Ridge | Daviess. |
| Tharp, W. H | Anchorage | Jeffersen. |
| Tharp, Maude | Junction City | Boyle. |
| Thurmond, E. C | Lytle | Lincoln. |
| Utterback, Caleb | Sharpsburg | Bath. |
| Wilson, Blanche | Covington | Kenton. |
| Yancey, Jessie O | Maysville | Mason. |

### 2. IN MECHANICAL ENGINEERING.

| | |
|---|---|
| Blessing, C. E | Carrollton. |
| Carlile, L. A | Lebanon. |
| Dowling, E. T | Lexington. |
| Elam, A. M | Ashland. |
| Freeman, T. W | Lexington. |
| Huntington, J. B | Lexington. |
| Kinkead, D. C | Lexington. |
| Lewis, A. T | Versailles. |
| Marrs, S. C | Lexington. |
| Megee, H. H | Lexington. |
| Muncy, V. E | Lexington. |
| Pollock, J. D | Franklin, Pa. |
| Scrugham, J. G | Reno, Nev. |
| Shipley, J. C | Scottsville. |
| Simkins, C. L | Lexington. |
| St. John, C. P | Brooklyn, N. Y. |
| Strong, E. T | Urbana, Ill. |
| Tanner, A. R | Lexington. |
| Williamson, H | Lexington. |

### 3. IN PHYSICS.

| | |
|---|---|
| Kelly, Mary Louise | Owensboro. |
| Sweeny, Mary E | Lexington. |
| Woolfolk, J. W | Midway. |

### 4. IN THE ACADEMY.

| | |
|---|---|
| Bass, Bernard Wentworth | Richmond, Va. |
| Bean, Harry Campbell | Lexington. |
| Cassell, George Rose | Lexington. |
| Caywood, Clarence Power | Ewing. |
| Dowden, William Pugh | Oklahoma. |
| Duvalle, Rankin Powers | Stamping Ground. |
| Estill, David Chenault | Lexington. |

Fotch, George.....Lexington.
Garvey, Leota.....Lexington.
Geary, Thomas Charles.....Lexington.
Goode, Ernest Frankel.....Lexington.
Greathouse, Elsie.....Pinckard.
Hardin, Guy Aud.....Brandenburg.
Hart, Robert Singleton, Jr.....Pisgah.
Hubbard, Isaac Madison.....Waco.
Hutchcraft, David Keller.....Lexington.
Jackson, Samuel Texas.....Clinton.
Jones, Sadocie Connellee.....Porter.
Kearney, Daniel Anthony.....Donerail.
Kinkead, Davis Carneal.....Lexington.
Kinnear, William Kenneth.....Lexington.
Martin, Thomas.....Lexington.
Mathis, Charles Brothers.....Lexington.
Maxey, Reuben Yancey.....Sacramento.
McNamara, William Ignatius.....Lexington.
Patrick, Samuel James.....Swampton.
Proctor, Bennett McCreary.....Lexington.
Rodes, Joseph Waller, Jr.....Lexington.
Scherffius, Frederick Fanon.....Louisville.
Smith, Harry Gorin.....Glasgow.
Smith, Monroe Standish.....Lexington.
Stoll, John William Moore.....Lexington.
Stevens, Harold Edwin.....Pruett.
Thomasson, Charles Francis.....Livermore.
Vaughn, James Marion.....Lexington.
Viley, John Rodes.....Lexington.
Ware, Cornelius.....Pulaski.
Wagner, Franklin August.....Lexington.
Willmott, Curtis Simeon.....Lexington.
Wilson, James Hardin.....Richmond.
Worthington, Elmer Francis.....Morgan.
Wright, Charles Roy.....Stanford.

## SUMMARY.

| Collegiate Students. | Scientific. | Classical. | Civ. Eng. | Mech. Eng. | Min. Eng. | Normal. | Agricult. | Class Totals. |
|---|---|---|---|---|---|---|---|---|
| Post-Graduates | 5 | 3 | 1 | 5 | .. | .. | .. | 14 |
| Seniors | 19 | 18 | 12 | 20 | 1 | 5 | 1 | 76 |
| Juniors | 10 | 14 | 16 | 42 | 2 | 1 | 6 | 92 |
| Sophomores | 15 | 21 | 19 | 47 | 3 | 5 | 6 | 115 |
| Freshmen | 8 | 20 | 22 | 63 | .. | 4 | 4 | 121 |
| Totals | 57 | 76 | 70 | 177 | 6 | 15 | 17 | 418 |

| | |
|---|---|
| Students not regularly classified | 4 |
| Normal Students for the State Diploma | 17 |
| Normal Students for the State Certificate | 36 |
| Normal Students for the County Certiffcate | 56 |
| Normal Students in the Summer School | 55 |
| Mech. Eng. Students in the Summer School | 19 |
| Students of Physics in the Summer School | 3 |
| Students in the Academy | 132 |
| Academy students in the Summer School | 42 |
| Total | 364 |
| Deduct students counted twice | 50 |
| Total of non-collegiate students | 314 |
| Total of Collegiate students | 418 |
| Whole number of students | 732 |

# REGULATIONS.

### TRAVELING EXPENSES OF STUDENTS.

By the terms of the recent legislation upon the Agricultural and Mechanical College of Kentucky, a county appointee is entitled to have his traveling expenses from his home to the College and return paid by the College, on the following conditions :

1st. He must be appointed according to law, a copy of which is in the hands of each County Superintendent of Schools.

2d. He must travel from home to the College by the shortest, least expensive, and the most expeditious route, and take receipts for all necessary expenses of travel, depositing the same, upon arrival, with the President of the College.

3d. He must present himself for matriculation within one week after the beginning of the fall term of the collegiate year.

4th. He must bring a certificate of good moral character, signed by two or more well-known and responsible citizens of his county.

5th. He must pass creditably the entrance examination required for admission.

6th. He must remain a student of the College for ten consecutive months, or one collegiate year.

7th. He must maintain during the collegiate year a good moral character, and such class standing as will enable him to pass all final examinations.

8th. He must sign a declaration at the end of the collegiate year that he has not knowingly violated any of the regulations involving his moral character as a student, nor been a party directly or indirectly to the injury of property on the College grounds or in the College buildings.

If at the end of the collegiate year the foregoing conditions have been complied with, the President of the College shall certify the fact to the Treasurer of the College, who, upon said certificates as vouchers shall pay to the appointee the amount shown by the receipts aforesaid, and in addition thereto the sum for discharging the necessary expenses to be incurred in returning home.

### COLLEGE EXPENSES.

The necessary expenses of a student while at College need not exceed the following estimates. As a rule the less pocket-money allowed by parents or guardians the better it is for the pupil. When supplies of pocket-money are kept short the opportunity for contracting vicious habits is correspondingly diminished. Students should not be allowed by their parents to create any debts. All moneys intended for the use of the students should be deposited with the Commandant.

For a county appointee, occupying a room in the dormitory, the necessary expenses are as follows :

| | |
|---|---|
| Tuition free, | $000 00 |
| Matriculation free, | 000 00 |
| Room rent free, | 000 00 |
| Use of furniture in room, | 2 50 |
| Washing, about | 10 00 |
| Uniform, | 19 00 |
| Books, about | 8 00 |
| Total, | $39 50 |

Each room must be provided by each occupant thereof, *at his own expense*, with a good mattress, three comforts or blankets, one pillow, three pillow-slips, four sheets, looking-glass, blacking brush, hair-brush, clothes-broom or brush. Some of these articles may be brought from home by the student.

For students who are not supplied with appointments from the Legislative Representative Districts of the Commonwealth, and who board in private families, the necessary expenses will be as follows:

| | |
|---|---|
| Tuition fee, | $ 15 00 |
| Matriculation fee, | 5 00 |
| Board and lodging, 38 weeks, at $3.50 to $4 per week | 133 00 to $152 00 |
| Washing, | 10 00 |
| Uniform, | 19 00 |
| Books and stationery, | 10 00 |
| Total, | $192 00 to $201 00 |

Those who occupy rooms in the dormitory pay $6.50 each (yearly) for the use of a room and its furniture. A standing deposit of $5 is required from each student, which deposit is refunded when his connection with the College is terminated, less the amount which may be assessed against him for damage done the buildings, furniture, or premises. All damages, injuries, defacements, etc., which rooms and furniture in the dormitory sustain during occupancy will be charged to the occupant thereof. All injuries, damages, defacements, etc., which the halls sustain will, unless specifically traced, be charged to the occupants of the respective sections collectively.

### BOARDING.

For the accommodation of students sent as beneficiaries of Legislative Representative Districts of the State, rooms for one hundred and forty students are provided in the dormitories, but no student under seventeen years of age will be permitted to room in the dormitories, unless all of his classes shall be in one of the regular collegiate courses. Good boarding, with fuel, lights, and furnished room, can be obtained in private families at rates varying from $3.50 to $4 per week.

### FREE TUITION, BENEFICIARIES.

Each Legislative Representative District is allowed to send, on competitive examination, *one properly prepared student* each year to this College, free of charge for tuition.

[A statement for the guidance of County Superintendents: 1. If the county forms one or more than one Legislative Representative District, each district is entitled to keep four students in the College and four in the Normal School free of tuition.

2. If a Legislative Representative District embraces more than one county, each county is entitled to keep four students in the College and four in the Normal School free of tuition.]

Beneficiaries are appointed on competitive examination. A Board of Examiners is appointed for this purpose by the County Superintendent of common schools. The results of examination are reported to the Superintendent, who from the data thus furnished selects the appointee. Examinations are made upon subjects transmitted to the County Superintendent by the Faculty of the College. One appointment is made each year.

Appointments are made by the County Superintendent between the first day of June and the first day of August of each year. Appointments when made should be immediately certified to the President of the College.

Appointments for the College proper, viz., the Agricultural, Mechanical Engineering, Civil Engineering, Scientific, Classical, and Normal Collegiate courses, are all valid for the term of years necessary to complete the course of study in which the appointee matriculates. This includes the course in the Academy.

It follows from the above that a county which makes its appointments regularly according to law will have for the session of 1901–2 one appointment to the College; for the session of 1902–3 two appointees; for the session of 1903–4 three appointees; for the session of 1904–5 four appointees. When the first appointee completes his course, or ceases to be a student, another appointee takes his place. When the quota of a county is full it will at least have four appointees in regular attendance.

Each appointee is required to pass an entrance examination at the College on the subjects comprising all that is embraced in Arithmetic, English Grammar, Geography, and United States History in the common school course.

All persons are eligible between the ages of fourteen and twenty-four who have completed the common school course—preference being given to young men or women whose means are limited, to aid whom this provision is especially intended.

Any person not an appointee may enter the College on payment of fees, but no one who is not an appointee receives traveling expenses or is exempt from the payment of fees.

### APPOINTEES TO THE NORMAL COURSE.

The law makes provision for the appointment of four teachers, or persons preparing to teach, each year. Appointments may be made aud certified to the President of the College between the first day of July and the thirty-first day of December of each year.

Appointments to the Normal School are tenable for one year.

Applicants for appointments are examined by a Board of Examiners appointed by the County Superintendent on subjects transmitted by the Faculty, viz.: upon Arithmetic, English Grammar, United States History, and Geography. They should not be less than seventeen years of age.

They are also required to pass an entrance examination at the College. They must likewise bring certificates of good moral character.

Matriculates of the Normal Department will be required to sign an obligation to teach in the Common Schools of Kentucky for as many months as they receive free tuition.

### SPECIAL COURSES OF STUDY.

Special courses of study are not provided for in the Academy, the Normal School, or the College proper; provided, however, that persons who have passed the age of twenty-four years, the limit below which appointments as beneficiaries under the law must be made, may under certain conditions be allowed to pursue selected studies without matriculating in one of the regular courses of the College.

### CHANGE OF CLASSIFICATION.

No change of classification is allowed during a term.

### ACCREDITED SCHOOLS.

Schools, whether public or private, may be accredited in accordance with a resolution of the Faculty providing that graduates of these may be exempted from entrance examinations to the College when the heads of these schools have complied with certain conditions.

Further, the Board of Trustees have made an annual award of a free scholarship to the pupil in each accredited school who has completed the certified course with the highest class standing. This scholarship entitles the recipient to free tuition. If, in addition, the holder of a scholarship obtains the "County Appointment," he is entitled to free room in one of the dormitories and free traveling expenses.

A revised list of these schools is appended:

### PUBLIC HIGH SCHOOLS.

Ashland, J. C. Crabbe, Superintendent.
Augusta, J. R. Sterrett, Superintendent.
Bellevue, John Maddox, Superintendent.
Carlisle, W. F. Ramey, Superintendent.
Carrollton, B. F. Gabby, Superintendent.
Catlettsburg, J. B. Leech, Superintendent.
Corydon, Barksdale Hamlet, Superintendent.
Covington, John Morris, Superintendent.
Cynthiana, C. A. Leonard, Superintendent.
Dayton, E. P. West, Superintendent.
Elizabethtown, E. E. Olcott, Superintendent.
Elkton, Henry L. Trimble, Superintendent.
Eminence, E. A. Scott, Superintendent.
Falmouth, E. B. Buffington, Superintendent.
Finchville, B. A. Logan, Superintendent.
Flemingsburg, T. A. Luman, Superintendent.
Frankfort, S. L. Frogge, Superintendent.
Fulton, J. C. Cheek, Superintendent.
Greenup, George W. Chapman, Superintendent.
Greenville, P. G. Shaver, Superintendent.
Harrodsburg, C. W. Bell, Superintendent.
Henderson, Livingston McCartney, Superintendent.

Hickman, A. R. Boone, Superintendent.
Hopkinsvilie, J. B. Taylor, Superintendent.
Horse Cave, Moses E. Wood, Superintendent.
Kenilworth (Ind), Edward Manley, Superintendent.
Lawrenceburg, H. V. Bell, Superintendent.
Lexington, M. A. Cassidy, Superintendent.
Johnson High School, J. H. McDaniels, Principal.
Dudley High School, Col. J. R. Graves, Principal.
Louisville, E. H. Marks, Superintendent.
Female High School, W. H. Bartholomew, Principal.
Male High School, R. P. Halleck, Principal.
Manual Training High School, E. P. Chapin, Principal.
Ludlow, Frank Appel, Superintendent.
Marion, Charles Evans, Superintendent.
Mayslick, W. M. Chandler, Superintendent.
Maysville, E. Regenstein, Superintendent.
Middlesboro, M. O. Winfrey, Superintendent.
Midway, W. R. Eubank, Superintendent.
Morganfield, A. C. Burton, Superintendent.
Mt. Sterling, H. M. Gunn, Superintendent.
Newport, John Burk, Superintendent.
Nicholasville, R. G. Lowrey, Superintendent.
Orange (N. J.), W, M. Swingle, Superintendent.
Owensboro, McHenry Rhoads, Superintendent.
Owenton, W. E. Williams, Superintendent.
Paducah, Charles B. Hatfield, Superintendent.
Paris, J. A. Sharon, Superintendent.
Pembroke, C. E. Dudley, Superintendent.
Richmond, Caldwell High School, W. H. Brock,Superin'dent.
Somerset, D. N. Boynton, Superintendent.
Versailles, W. F. Pate, Superintendent.
West Point, D. S. Roberts, Superintendent.
Wiliiamstown, W. G. Welborn, Superintendent.
Winchester, R. M. Shipp, Superintendent.

### PRIVATE ACADEMIES, COLLEGIATE INSTITUTES.

Auburn, Auburn Seminary, Charles B. Bates, Principal.
Bardstown, Nelson Normal High School, E. H. Crawford, Principal.
Campbellsburg, High School, J. W. Pearcy, Principal.
Cynthiana Classical School, Clarke H. Tandy, Principal.
Danville (Va.), Military Institute, Campbell and Snyder, Ptincipals.
Elkton, Vanderbilt Training Schooi, J. H. Harrison, Principal.
Fulton, Carr Institute, T. N. Wells, Principal.
Hardinsburg, Breckinridge Normal School, Prof. Crabb, Principal.
Harrodsburg Academy, W. W. Ensminger, Principal.
Hartford College and Business Institute, T. J. Morton, President.
Hazel Green, Academy, Wm. H. Cord, Principal.
Hodgenville, Kenyon College, J. C. Pirtle, President.
Jetts, Academy, Mrs. Mary Crutcher, Principal.
Knoxville (Tenn.). Baker-Himel School, Norman H. Pittman, Principal.
Leitchfield, Normal College and Business Institute, W. C. Losey, Principal.
Lexington Private School, Miss Ella Williams, Principal.
Lexington Private School, Miss Lucy S. Collier, Principal.
Lexington, Alleghan Academy, A. N. Gordon, Principal.
Louisviile, St. Xavier's College, Bro. James, Principal.
Louisville, University School, W. H. Tharp, Head Master.
Louisville, School for Boys, Davenport and Patterson, Principals.

Maysville, Private School, Fannie I. Gordon, Principal.
Middleburg, Normal College, J. W. Davis, Principal.
Millersburg, Military Institute, C. M. Best, Principal.
Mt. Sterling, Goodwin's High School, M. J. Goodwin, Principal.
Nicholasville, Jessamine Institute, Mrs. J. B. Skinner, Principal.
Nicholasville, School for Boys, T. B. Threlkeld, Principal.
Richmond, Madison Institute, J. W. McGarvey, Principal.
Stanford, Male Academy, E. L. Grubbs, Principal.
Stanford, Female Academy, Mrs. Nannie S. Saufley, Principal.
Versailles, Training School, W. O. Vaught, Principal.
Williamsburg, Williamsburg Institute, Dr. E. E. Wood, President.
Williamsburg, Williamsburg Academy Prof. Hill, Principal.
Educational Department Y. M. C. A., George B. Hodge, Secretary.

Upon application, printed forms will be sent to the heads of schools who may desire to have them placed in the list of the accredited schools. These forms are to be filled out with an announcement of the courses of study and mailed to the Chairman of the Committee on Accredited Schools at the State College.

Only pupils from duly accredited schools will be admitted to the College without examination, and *they* must present a certificate from their superintendent or principal and it must bear the signature of the President of the State College.

Every pupil who completes an accredited course is entitled to a certificate attesting the fact, and heads of schools in the foregoing list will oblige the College Committee on Accredited Schools by sending promptly their recommendations for certificates and scholarships.

### MANUAL LABOR.

The work necessary for carrying on the agricultural and horticultural operations of the College is done by the students, and is paid for at rates varying from six to ten cents per hour. Its design is twofold: to put in practice the instruction received in the class-room, and to assist students who are in need of money. The experience of this College is that of Agricultural Colleges generally—that compensated labor is not remunerative to the College.

*The College assumes no obligation to furntsh students an opportunity to labor for compensation.*

Students are paid monthly for the service rendered, and apply the money as they see proper.

*No student, however, should come to this College expecting to maintain himself exclusively by compensated labor. At least seventy-five dollars per annum, exclusive of his earnings while here, should be at the command of every student who wishes to avail himself of the advantages of the system of compensated labor.*

### CERTIFICATES OF CHARACTER.

All applicants for admission into any class of the College or Academy must bring satisfactory testimonials of good moral character.

### THE MONITRESS.

The young women who attend the College have assigned for their exclusive use a large and well-appointed study-room. Here, while they are not engaged in the class rooms or in the chapel, they are under the constant and strict supervision of the Monitress, Mrs. Blackburn, who has long been connected with the College and is well qualified for her duties.

### ENLISTMENT OF CADETS.

By a resolution of the Faculty, approved by the Trustees, no cadet of the State College is allowed to enlist in the State Guards.

### RULES OF CLASSIFICATION.

1. No student shall be considered as belonging to a given class, unless he takes at least three studies selected in that class or in a higher.

2. No student shall pass into a higher class while he has to make up studies required of him in the preceding year.

3. Students may be permitted, by the Deans of their courses and the Professors with whom they take their major studies, to register for studies not more than one year in advance of their classification.

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## CALENDAR.

### 1904.

Entrance Examinations begin .....Monday, Sept. 5th.
First Term begins.....Thursday, Sept. 8th.
Thanksgiving.....Thursday, Nov. 24th.
Board of Trustees meet.....Tuesday, Dec. 13th.
Christmas Holidays begin .....Friday, Dec. 23rd.

### 1905.

Second Term begins..... ...Tuesday, Jan. 3rd.
Second Term of Academy begins .....Monday, Jan. 23rd.
Washington's Birthday.....Wednesday, Feb. 22nd.
Union Society Contest..... Wedneaday, Feb. 22nd.
Third Term begins .....Monday, March 13th.
Patterson Society Contest .....Monday, March 27th.
Final Examinations begin.....Monday, May 22nd.
Board of Trustees meet..... .....Tuesday, May 30th.
Class Day .....Wednesday, May 31st.
Alumni Banquet..... .....Wednesday, May 31st.
Commencement .....Thursday, June 1st.
Summer School open from .....Thursday, June 8th to Aug. 15th.

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